Crossport Systems

Pivio™ Network Security System

User's Guide

Rev 1.7g
(April 16, 2001)

Crossport Systems, Inc.

www.crossport.com

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"Crossport Systems Pivio Network Security System User's Guide"

Notice

Revision 1.7g published April 16, 2001

Acknowledgements

The following people contributed to the creation, design, programming, testing, and documentation of Pivio Network Security System.

Rob Arnold
Edgar Faulkner
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Brian Fisher
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Ron Heinrichs
John Mohr
Jess Roberts
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Zeta Wagner
Robert Gidley
Paul Schnackenberg

About Crossport Systems

Crossport Systems, Inc., is dedicated to resolving the next generation of Internet security risks for small businesses with high-speed Internet access. Crossport is the creator of Pivio™, a network security system that integrates software, hardware and monitored services to protect businesses from hackers, viruses and service disruptions.

Crossport Systems, Inc.
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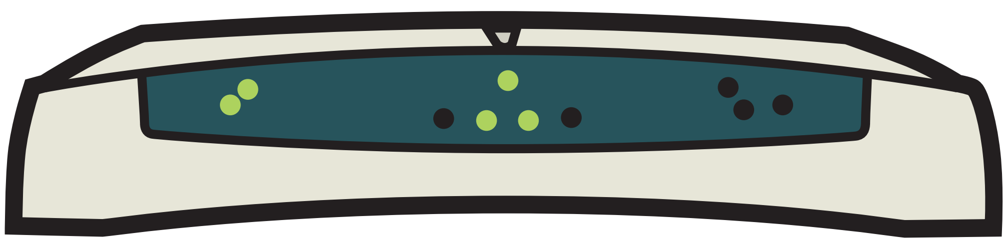
Ph: 425-576-8382
Fax: 425-576-9953
www.crossport.com
support@crossport.com

Table of Contents

Chapter 1
Introduction

Thank you for purchasing the Pivio Network Security System. Based on a powerful network computer, the Pivio Firewall incorporates firewall, virtual private networking (VPN), and management services. The Pivio System is secure, cost effective, and an easy-to-use solution for your Internet security needs.

The Pivio Network Security System is the complete Internet security solution.



Crossport Systems Pivio Network Security System

An alarming number of hacker attacks occur everyday, and anyone with an unprotected broadband Internet connection is susceptible to these attacks.

The Pivio System prevents many of the most common types of attacks. With the Pivio System, you control what information passes to and from your computer. IT managers can safely and easily extend corporate systems, applications, and information over high-speed Internet connections to employees, contractors, and partners in remote office locations.

Pivio System features and benefits

Features

- **Hacker Protection**
  Powerful firewall protection halts hackers at the door with a highly sensitive intrusion system.
- **Virus Protection**
  The best protection against viruses is up-to-date virus definitions. The Pivio System automatically updates the definitions on every PC with no action required by employees.
- **24/7 Security Response**
  The Pivio System provides around-the-clock surveillance designed to quickly identify and terminate unauthorized attempts to access your network. When the Pivio System senses a possible high-risk situation developing, you'll receive an Instant Alert.
- **Virtual Private Networking**
  Because the Pivio Firewall can create encrypted two-way private data transmissions, you can send sensitive information to remote locations, without compromising security.
- **Management Reporting**
  The Pivio System includes detailed and monthly summary reports. Reports are presented in a simple, intelligible format that keeps business owners informed of all Internet-related activities.

Benefits

- Make the Internet work effectively for you.
  The Internet can transform your business by reducing costs, enhancing productivity, and extending your market reach. With the Pivio System, you can also connect your office networks without undue risk, block undesirable Internet sites, and monitor your Internet connections and web site availability.
- Enjoy ease of use.
  Do you have limited technical knowledge or resources? No problem. The Pivio System is surprisingly easy to install and activate.
- Enjoy significant savings.
  You'll pay only a fraction of the cost of an in-house security expert. And you won't have to invest in expensive technology.

Technical Support

Phone: 425-576-8382

Fax: 425-576-9953

URL: http://www.crossport.com

Email: support@crossport.com

Chapter 2
Getting Started

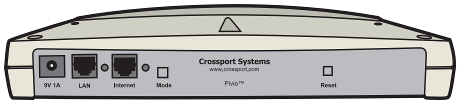
The Pivio Firewall is available in two models: Pivio Firewall and Pivio Plus Firewall, which includes a built-in four-port Ethernet hub. Both the Pivio Firewall and the Pivio Plus Firewall are configured in the same way. The only difference occurs when you connect the devices. This chapter provides separate instructions for the Pivio Firewall and the Pivio Plus Firewall.

The remaining chapters in this User’s Guide apply to both the Pivio Firewall and the Pivio Plus Firewall.

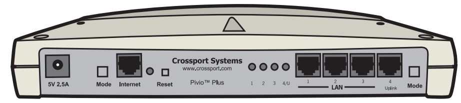
Model identification

The easiest way to identify your model is to look at the back of the unit.

A model number is shown on the back. Model 2000 is the Pivio Firewall and Model 2500 is the Pivio Plus Firewall . In addition, the Pivio Plus Firewall is also an Ethernet “hub.” There will be four slots on the back for plugging in various network devices and computers.



Pivio



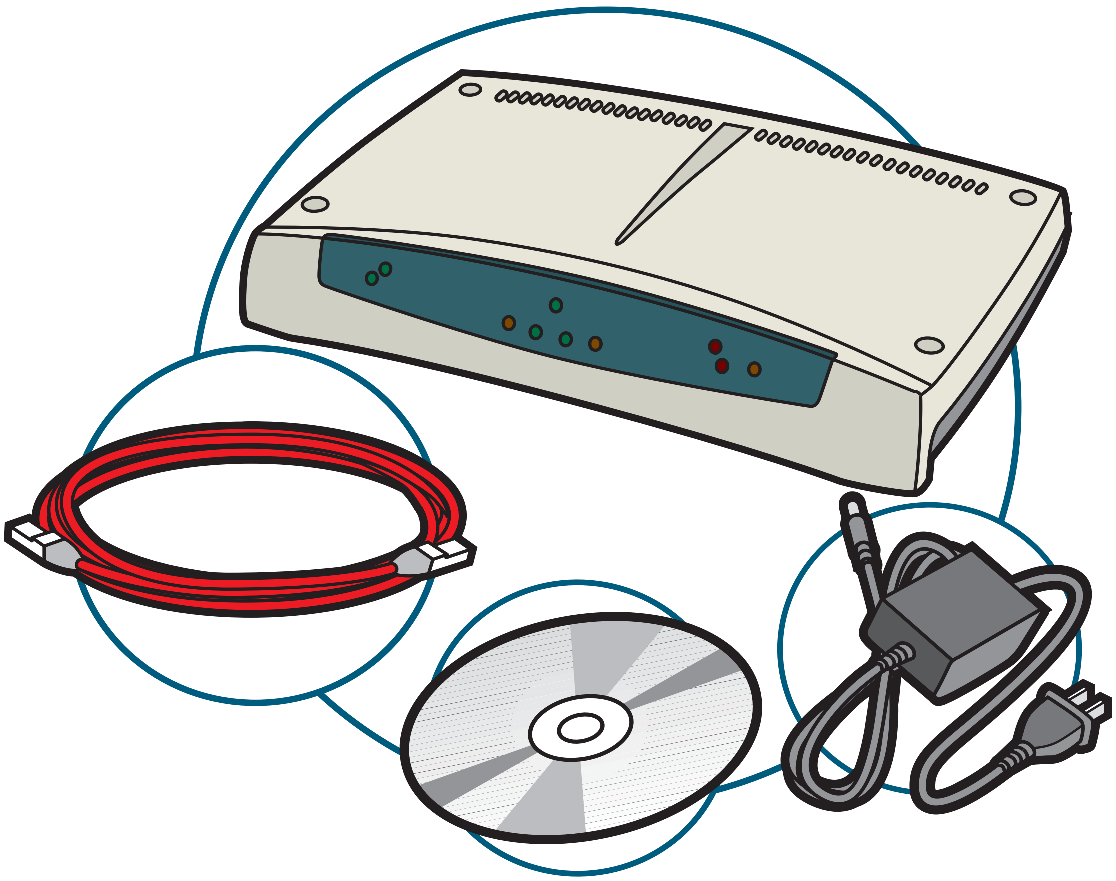
Pivio Plus

Installing the Pivio Firewall

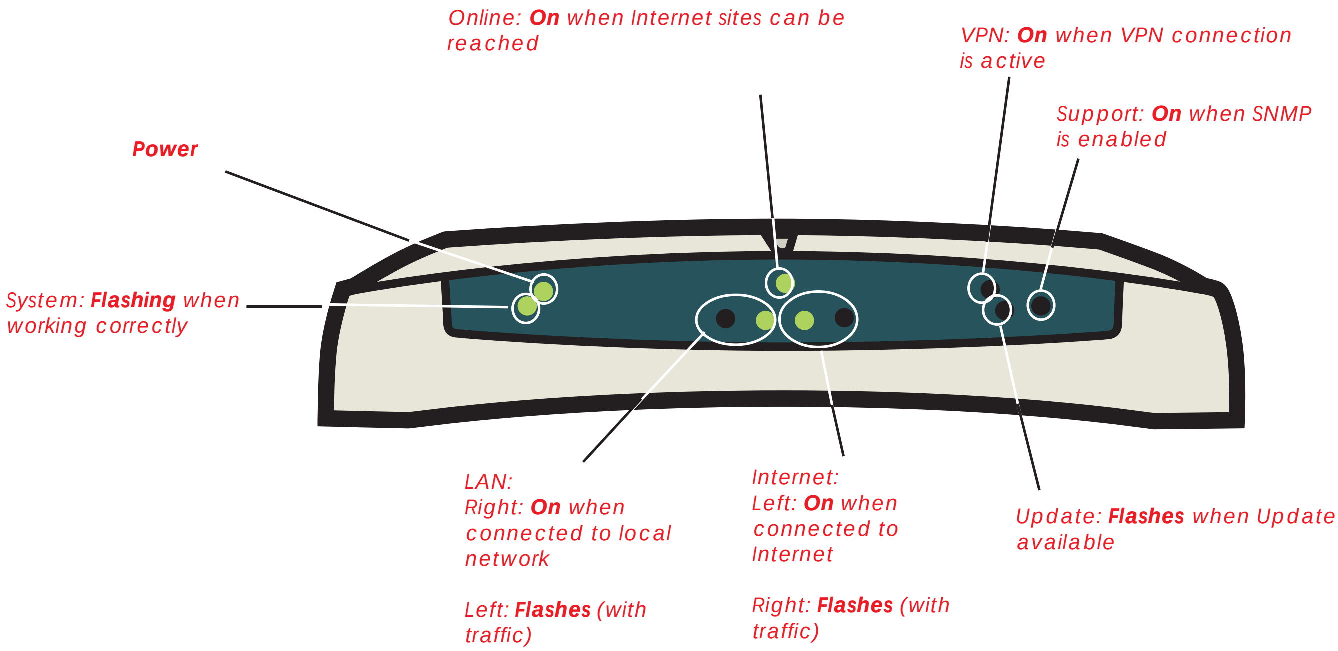
Packing list for the Pivio Firewall

Before you begin installing the Pivio Firewall , please check the contents of the box. You should have:

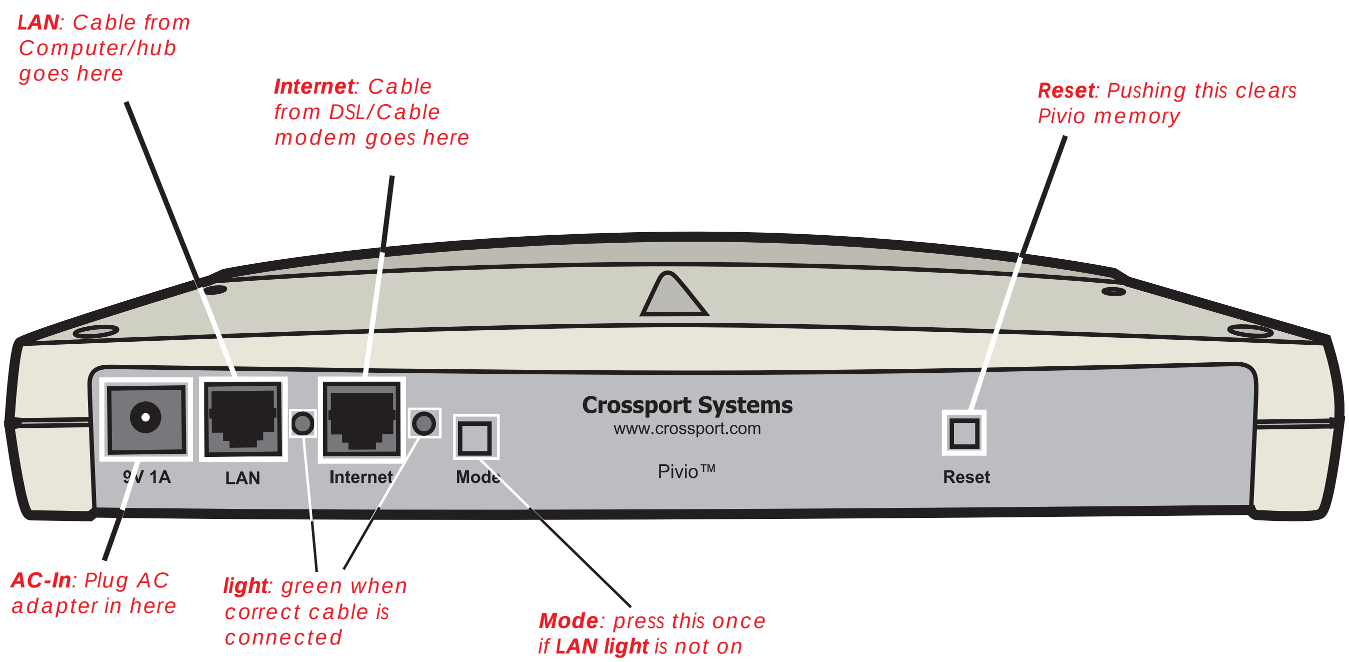
- ❍ Pivio Firewall
- ❍ AC adapter
- ❍ One red Ethernet crossover cable
- ❍ QuickStart CD-ROM
- ❍ "Getting Started" Illustrated Guides
- ❍ Registration reminder card



Pivio Firewall parts identification



Front



Back

Connecting the Pivio Firewall

Use the following procedure to connect the Pivio Firewall.

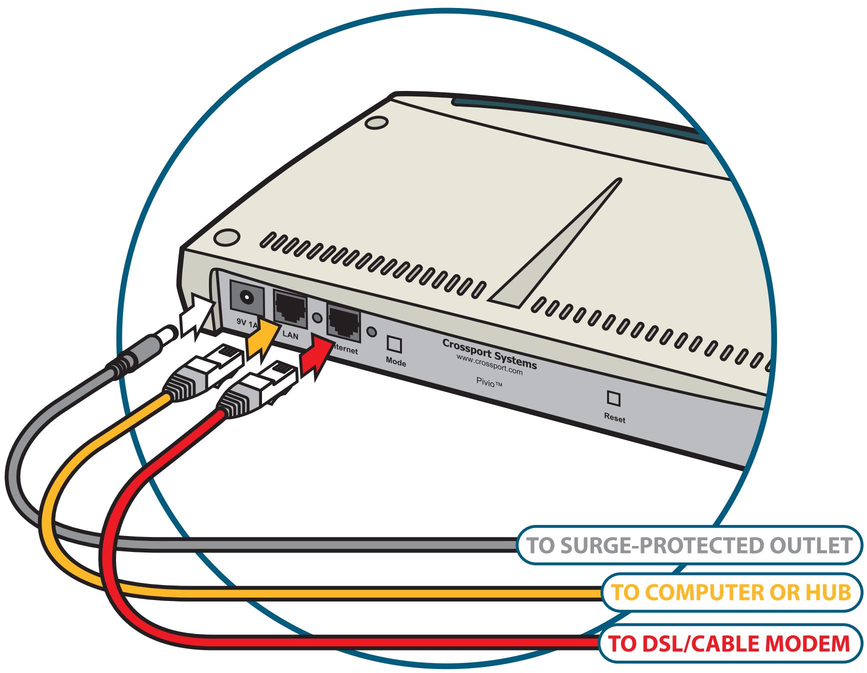
Step 1: Plug the AC adapter cord included with the Pivio Firewall into the "AC In" outlet located on the back of the firewall.

Step 2: Plug the AC adapter into a surge-protected outlet.

Step 3: Turn off your computer.

Step 4: Find the cable connecting your DSL/Cable modem to your computer or network hub. Unplug it from the modem, and plug it into the port labeled **LAN** located on the Pivio Firewall.

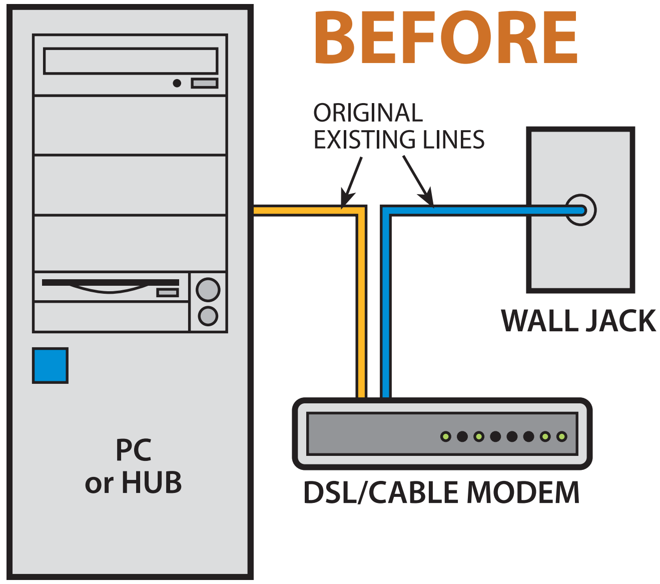
Step 5: Plug one end of the red cable into the port labeled **Internet** on the Pivio Firewall and the other end into your DSL/Cable modem.

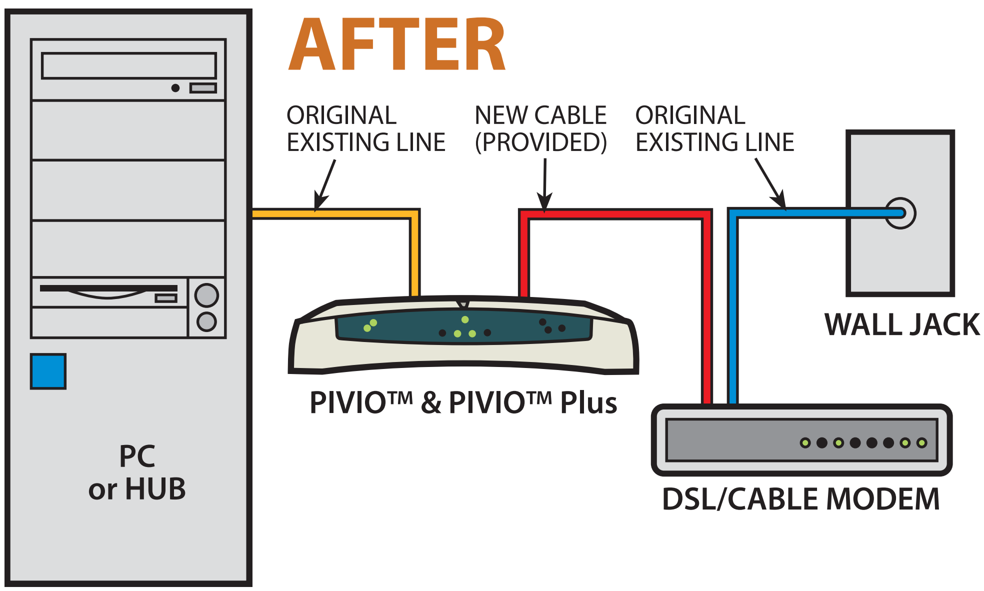


Insert the Pivio Firewall between your computer or hub and DSL/Cable modem

Step 6: Verify that the green LED light next to each port on the back of the Pivio Firewall is lit.

If the LED is not lit, press the **Mode** switch next to the port. This should cause the LED to light up.


BEFORE
ORIGINAL
EXISTING LINES
WALL JACK
PC
or HUB
DSL/CABLE MODEM

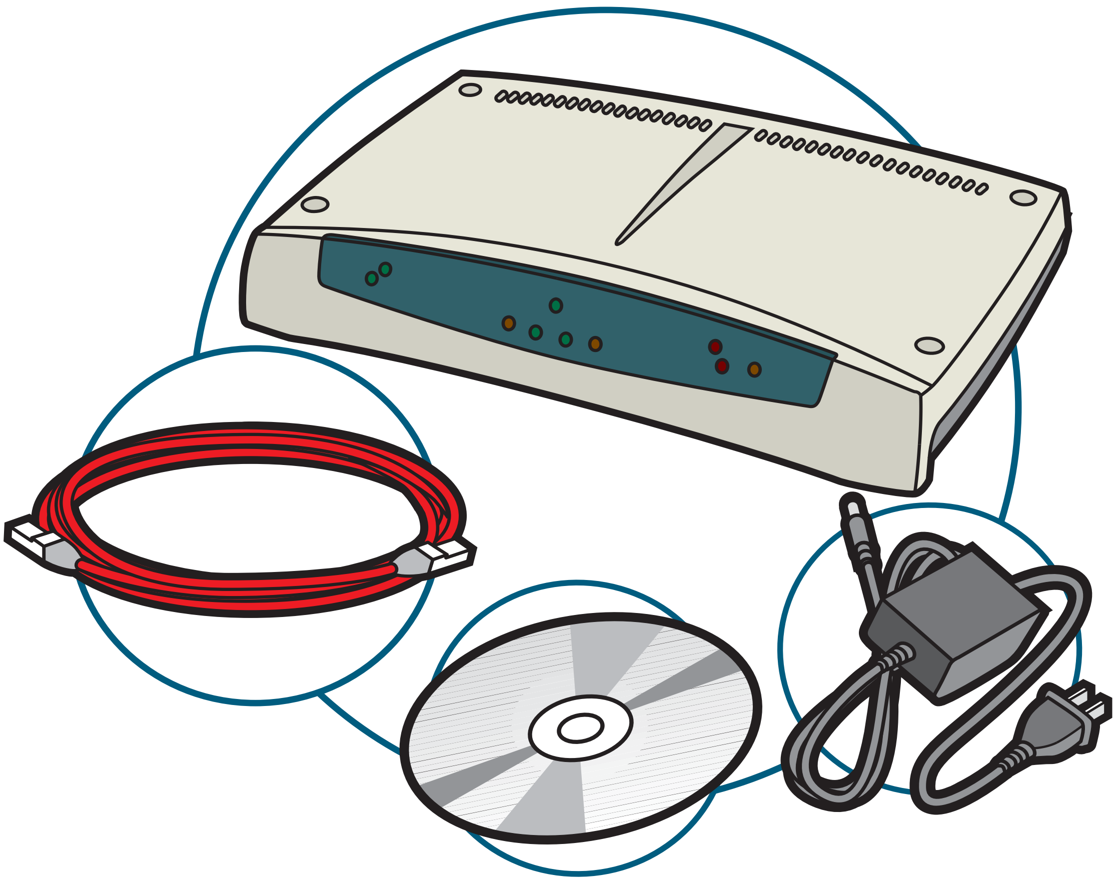

AFTER
ORIGINAL
EXISTING LINE
NEW CABLE
(PROVIDED)
ORIGINAL
EXISTING LINE
WALL JACK
PIVIO™ & PIVIO™ Plus
PC
or HUB
DSL/CABLE MODEM

Installing the Pivio Plus Firewall

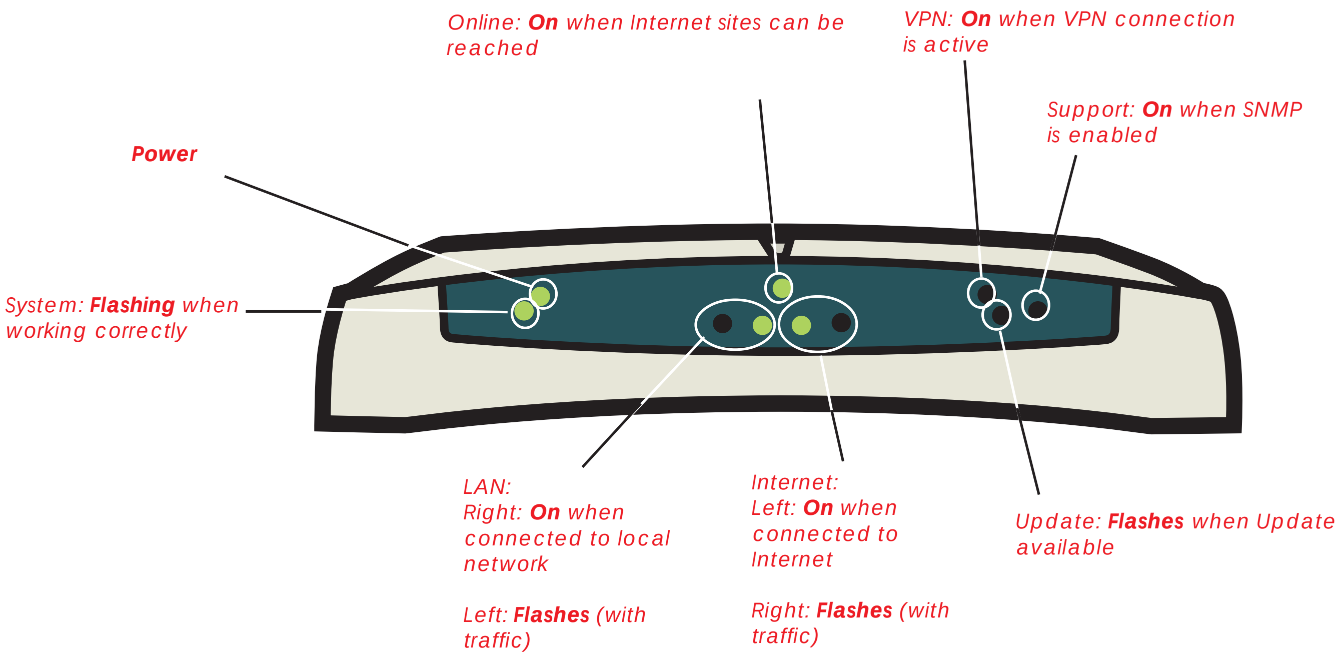
Packing list for the Pivio Plus Firewall

Before you begin installing the Pivio Plus Firewall, please check the contents of the box. You should have:

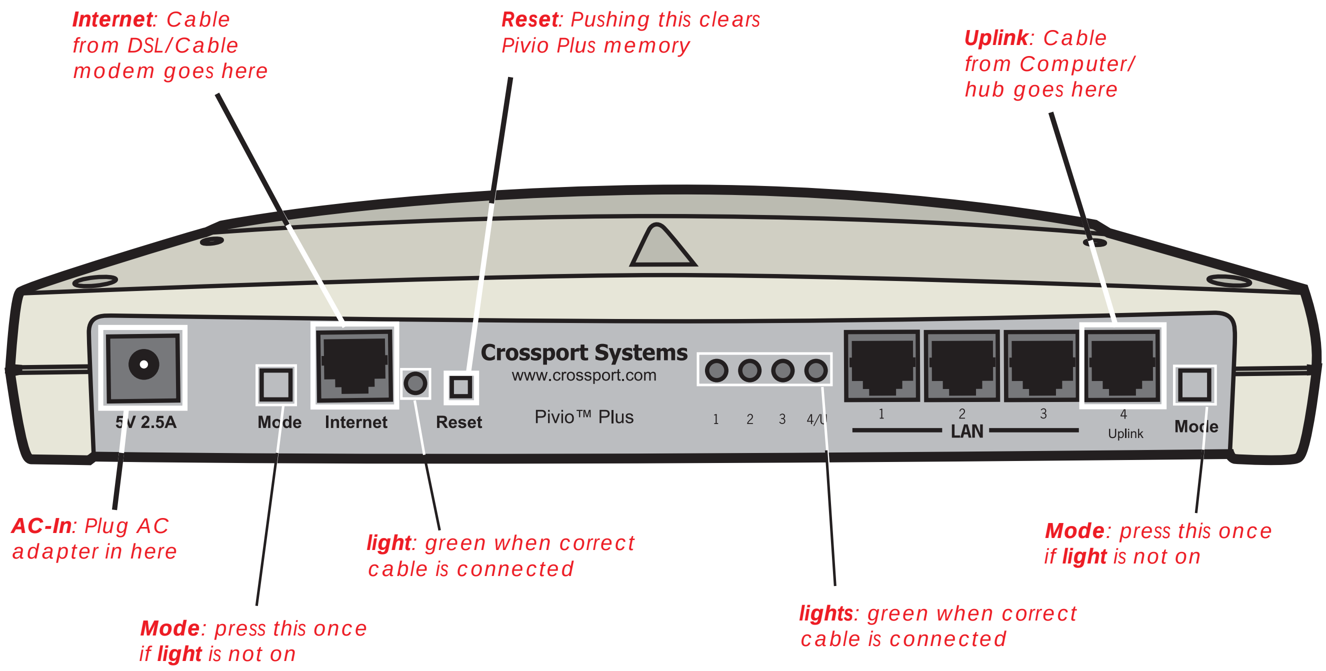
- ❍ Pivio Plus Firewall
- ❍ AC adapter
- ❍ One red Ethernet crossover cable
- ❍ QuickStart CD-ROM
- ❍ "Getting Started" Illustrated Guides
- ❍ Registration reminder card



Pivio Plus Firewall parts identification



Front



Back

Connecting the Pivio Plus Firewall

Use the following procedure to connect the Pivio Plus Firewall.

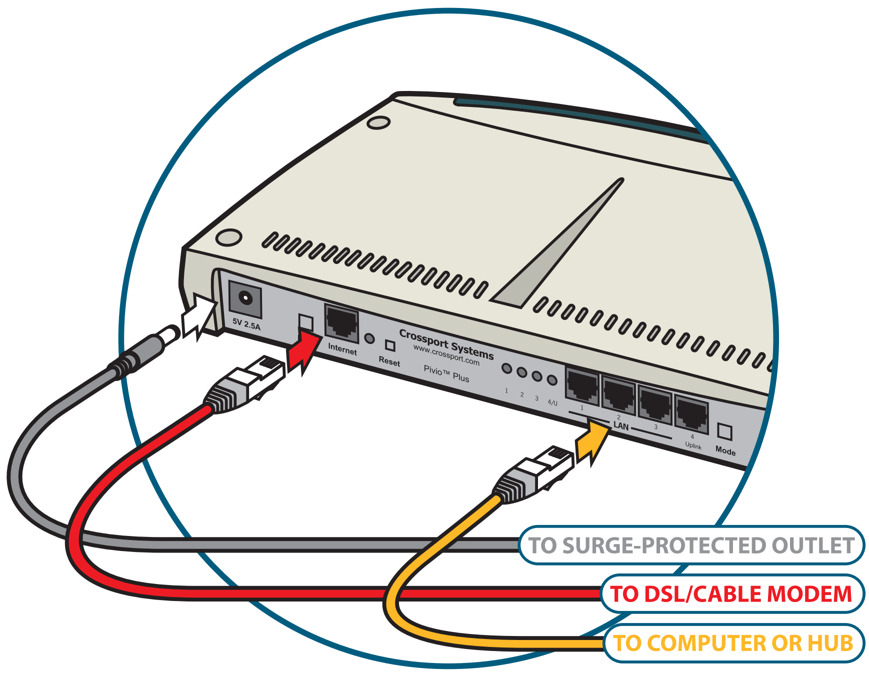
Step 1: Plug the AC adapter cord included with the Pivio Plus Firewall into the "AC In" outlet located on the back of the firewall.

Step 2: Plug the AC adapter into a surge-protected outlet.

Step 3: Turn off your computer.

Step 4: Find the cable connecting your DSL/Cable modem to your computer or network hub. Unplug it from the modem , and plug it into the port labeled **Uplink** located on the Pivio Plus Firewall.

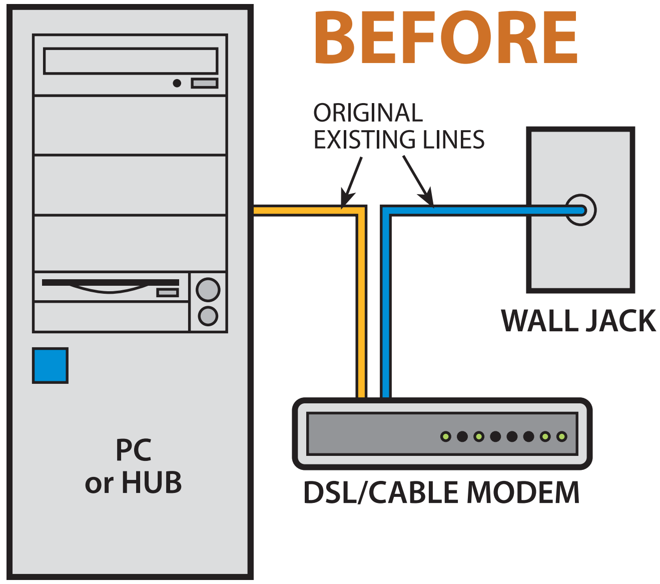
Step 5: Plug one end of the red cable into the port labeled **Internet** on the Pivio Plus Firewall and the other end into your modem.

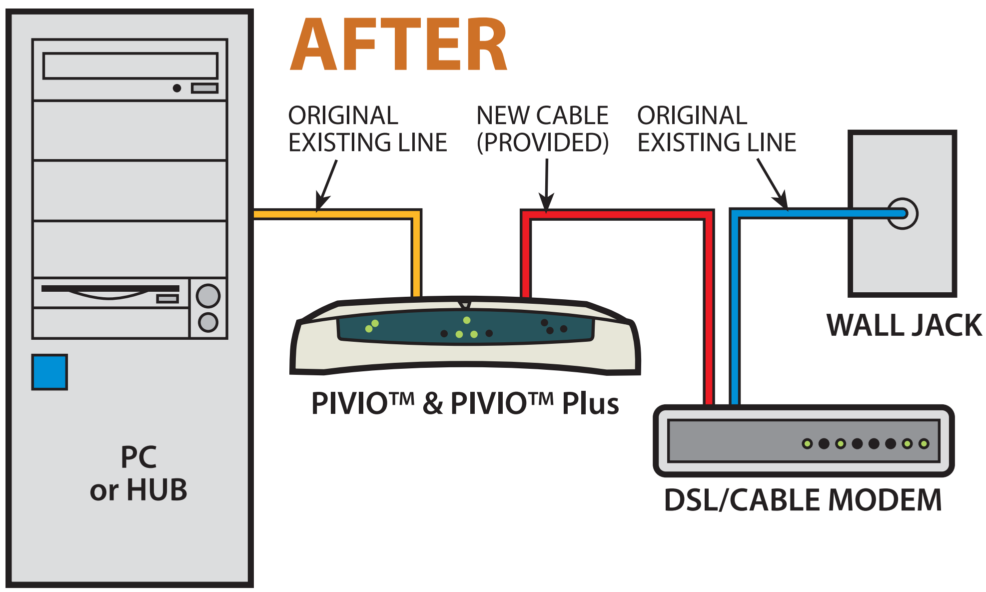


Insert the Pivio Plus Firewall between your computer or hub and DSL/Cable modem

Step 6: Verify that the green LED light next to each port with a cable in it on the back of the Pivio Plus Firewall is lit.

If the LED is not lit, press the **Mode** switch next to the port. This should cause the LED to light up.


BEFORE
ORIGINAL
EXISTING LINES
WALL JACK
PC
or HUB
DSL/CABLE MODEM


AFTER
ORIGINAL
EXISTING LINE
NEW CABLE
(PROVIDED)
ORIGINAL
EXISTING LINE
WALL JACK
PIVIO™ & PIVIO™ Plus
PC
or HUB
DSL/CABLE MODEM

Chapter 3
Dynamic IP configuration

Now that you have physically connected the Pivio Firewall as described in the previous chapter, you are ready to configure it to connect your computer or network to the Internet. Once the Pivio Firewall is configured, you are protected from intrusion and hacking from outside sources.

This chapter covers how to configure the Pivio Firewall if you use a dynamic IP address. If you know you have a static IP address, please go to the next chapter and use that procedure.

If you do not know your address type, follow the instructions in this chapter. If they do not work for your system, proceed to the next chapter.

What is a "dynamic" IP address?

An IP address is your computer's address for the Internet. When you visit a web page, you are asking the page to send information (the text and illustrations on the web page) to your computer. The web page sends this information to your IP address.

An IP address is a series of four numbers separated by periods, with each number having a value from "0" to "255." So, for example, "10.100.1.253" could be an IP address.

There are two general types of IP addresses: static and dynamic. A static IP address is always the same. A dynamic IP address can change every time you connect to the Internet.

How to determine if you have a dynamic IP address

When you signed up with your ISP, they provided information about your connection to them. If this information included a statement such as "IP addresses are assigned dynamically," you have a dynamic IP address. They may also have used the phrase "DHCP," which also indicates you have a dynamic IP address.

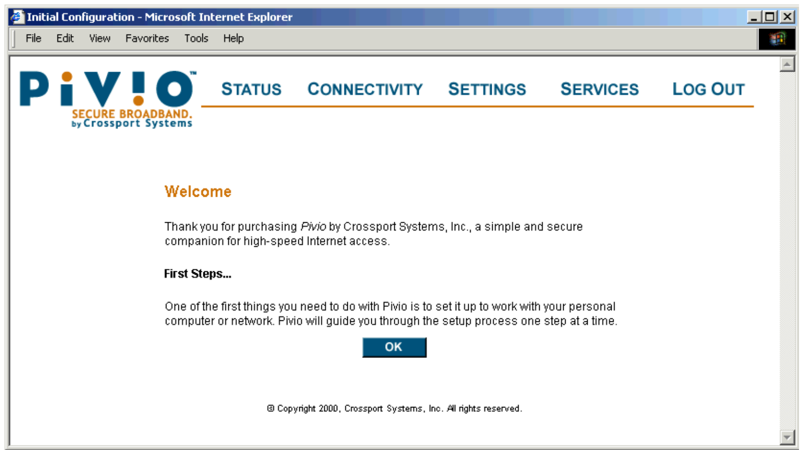
If, however, they provided a specific IP address, then you have a static IP address (and you should skip the rest of this chapter and go to the next chapter).

Configuring the Pivio Firewall

You must configure the Pivio Firewall before you can connect to the Internet. The configuration is done using your Internet browser—no additional software needs to be installed.

Step 1: From your web browser type `config.pivio.com` in the address line.

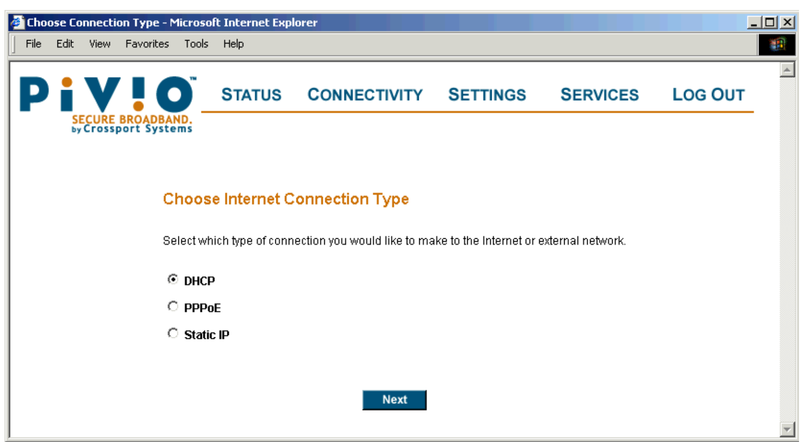
This connects your browser to the Pivio Firewall and displays information about configuration. If your browser uses a home page that is on the Internet, you will automatically connect to the Pivio Firewall .



The Pivio firewall's Welcome page opens in your Web browser

Step 2: Click **OK**. If your ISP has automatic DHCP configuration, you will see the "Configuration Complete" screen shown in the next section.

Otherwise, a screen appears asking you to choose the type of connection you want to use. Make sure **DHCP** is selected and click **Next**.

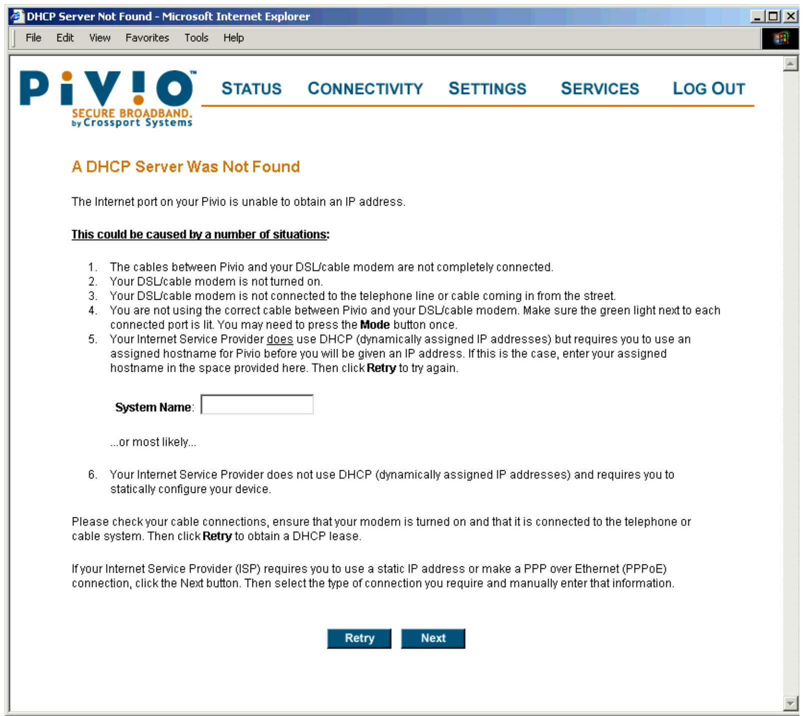


Make sure "DHCP" is selected

Step 3: It may take a few moments for the Pivio Firewall to configure. The next screen you see depends on how your Internet Service Provider (ISP) assigns IP addresses.

If you see the "Configuration Complete" screen, you can proceed to the next section.

If you see a screen shown below, it usually means your ISP assigned you a static IP, and you need to go to the next chapter to continue the setup.



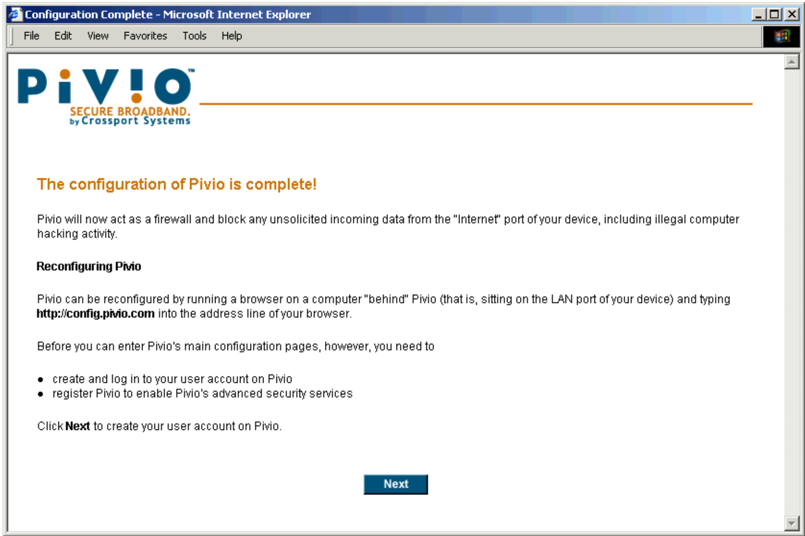
If you see this screen, it usually means you do not have a dynamic IP address and you need to use the procedure in the next chapter

Important

If you are sure you have a dynamic IP address, then there may be a problem with your connections. Follow the troubleshooting tips on the screen. Note that your ISP may also require you to enter a "System Name" to connect correctly.

Configuration complete

The Configuration Complete page indicates that the Pivio Firewall found your ISP and obtained an IP address.



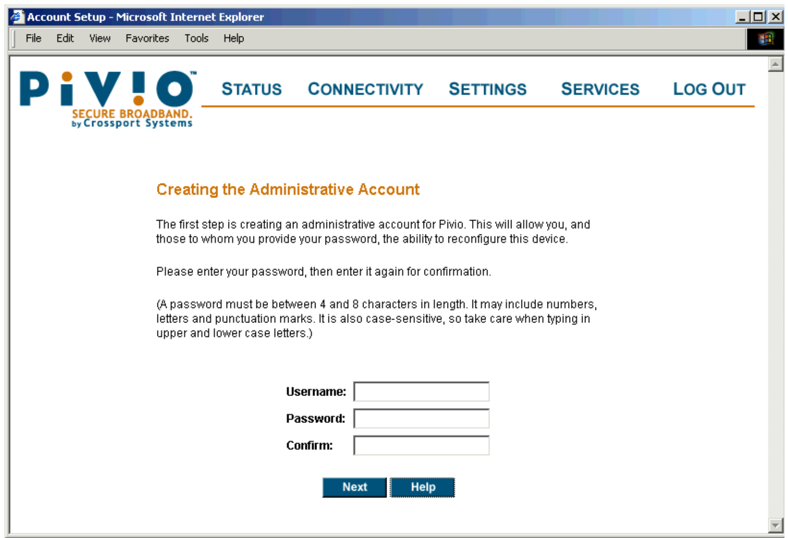
The Pivio Firewall is correctly configured

Set up your password

The next step is to create a user account and password for the Pivio Firewall. Once created, this account and password will be used whenever you want to change the Pivio Firewall's configuration.

Step 1: After the **Configuration Complete** screen appears as shown on the previous page, click **Next**.

The **Creating the Administrative Account** screen appears.



Use this screen to define an account and password

Step 2: Type in a one to eight character name for the account.

There is only one account per Pivio Firewall. When you choose a different user name, you are renaming the one account in the firewall.

Step 3: Choose a four to eight character password, and enter it in the **Password** field.

Your password may include numbers, letters and punctuation marks. It is also case-sensitive, so "password" is different from "PassWord."

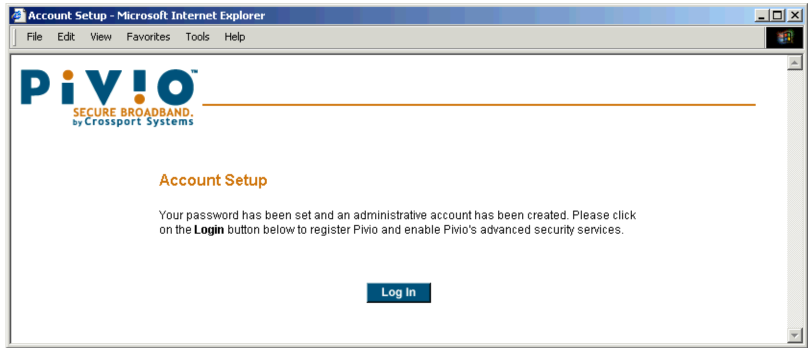
Step 4: Confirm your password by typing it again in the **Confirm** field.

Note

You must enter a password. You cannot create an account without a password.

Step 5: Click **Next**.

Your password for the Pivio Firewall is now set. You'll need your password each time you configure the Pivio Firewall. Please make a note of it and keep it in a safe place.

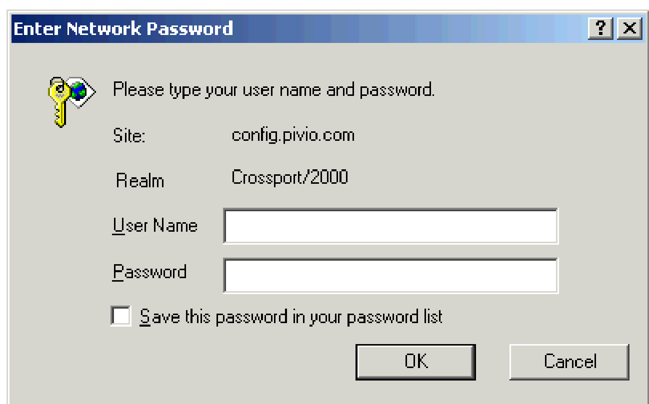


You now have a working user name and password

Caution
The password can be reset by resetting the Pivio Firewall. If someone has access to the firewall, they can simply reset the device to change the password. If you need a high level of physical security, you should lock up the Pivio Firewall.

Step 6: Click the **Log In** button to continue configuration.

Step 7: When prompted to log in, type your user name and enter your password.



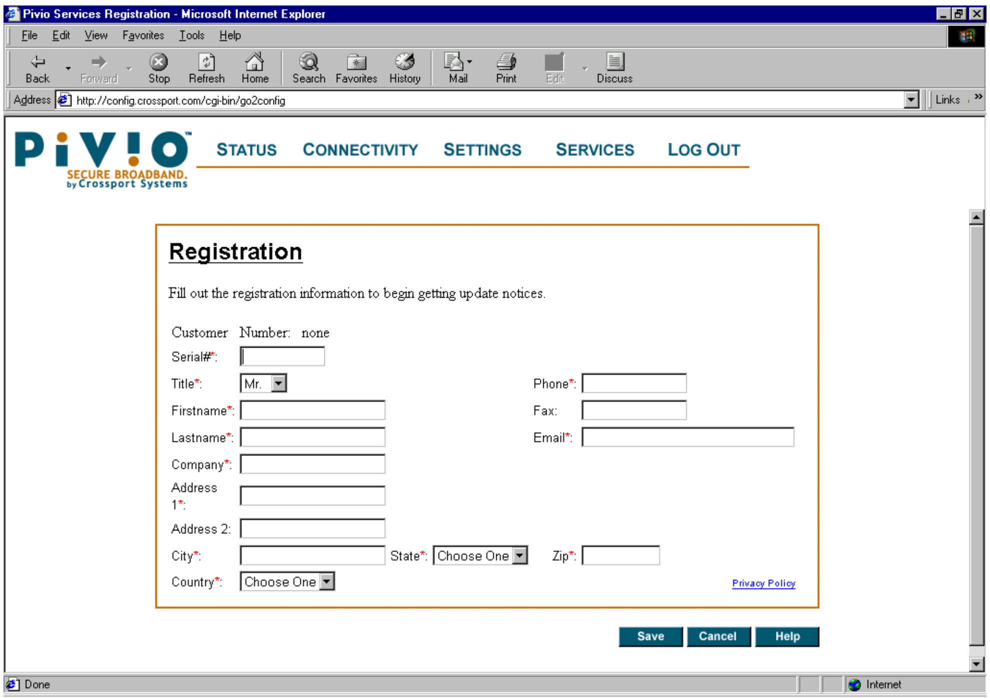
Enter your account information to continue configuring the Pivio Firewall

Registering your Pivio Firewall

Now that your Pivio Firewall is configured and your user account set up, the next step is to enter registration information. This information is securely transmitted to Crossport Systems. You can also set up a billing account and sign up for Pivio Services.

Step 1: After you log into the Pivio Firewall, a screen appears asking you for registration information. Fill out the fields on this screen.

Note that fields marked with a red asterisk (*) must be filled out before the Pivio Firewall will accept the registration information.

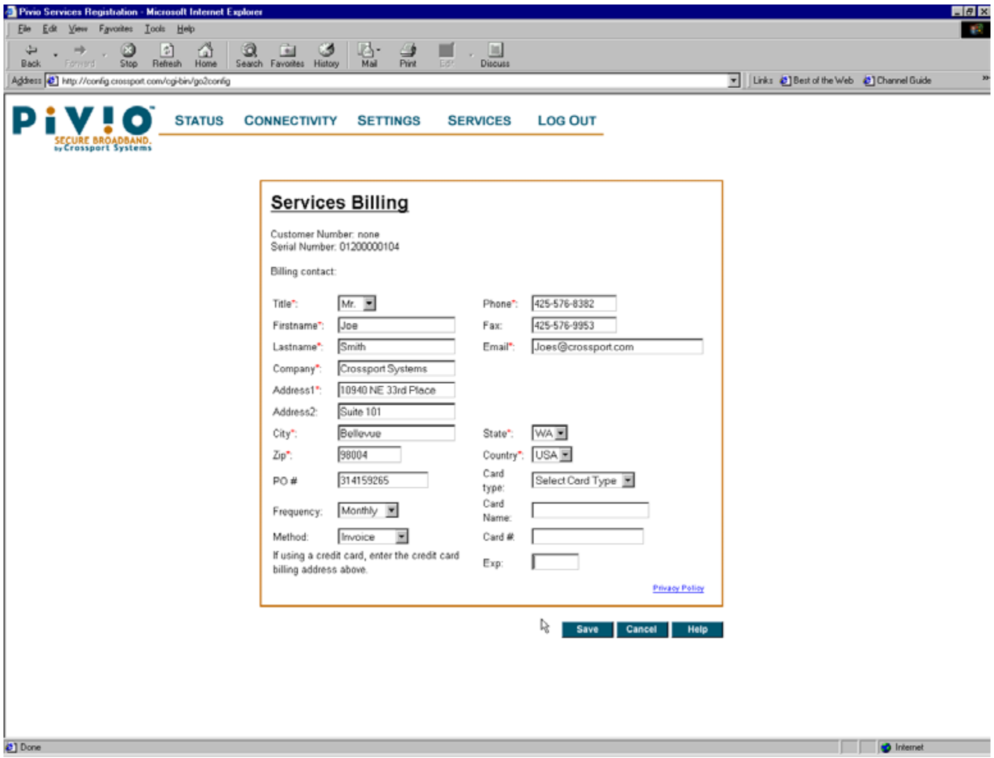


Fill out the fields on this form

Step 2: Click **Save** to save the information.

Step 3: You are now prompted to enter your billing information for Pivio services.

Note that fields marked with a red asterisk (*) must be filled out before the Pivio Firewall will accept the billing information.

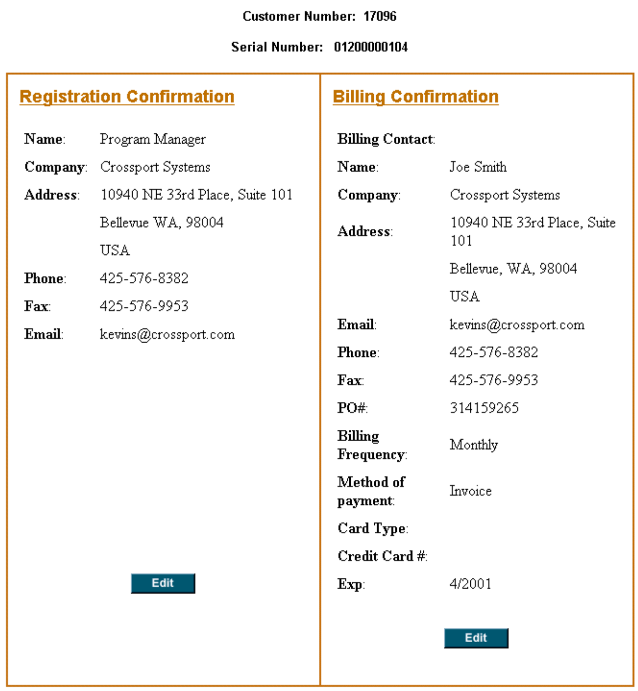


*Fill out the fields on the **Services Billing** screen*

Step 4: Click **Save** to save this information.

Step 5: You will now see a screen that lets you edit your registration and billing information.

If the information is correct, click **Next**.



Customer Number: 17096

Serial Number: 01200000104

Registration Confirmation

Name:	Program Manager
Company:	Crossport Systems
Address:	10940 NE 33rd Place, Suite 101
	Bellevue WA, 98004
	USA
Phone:	425-576-8382
Fax:	425-576-9953
Email:	kevins@crossport.com

Edit

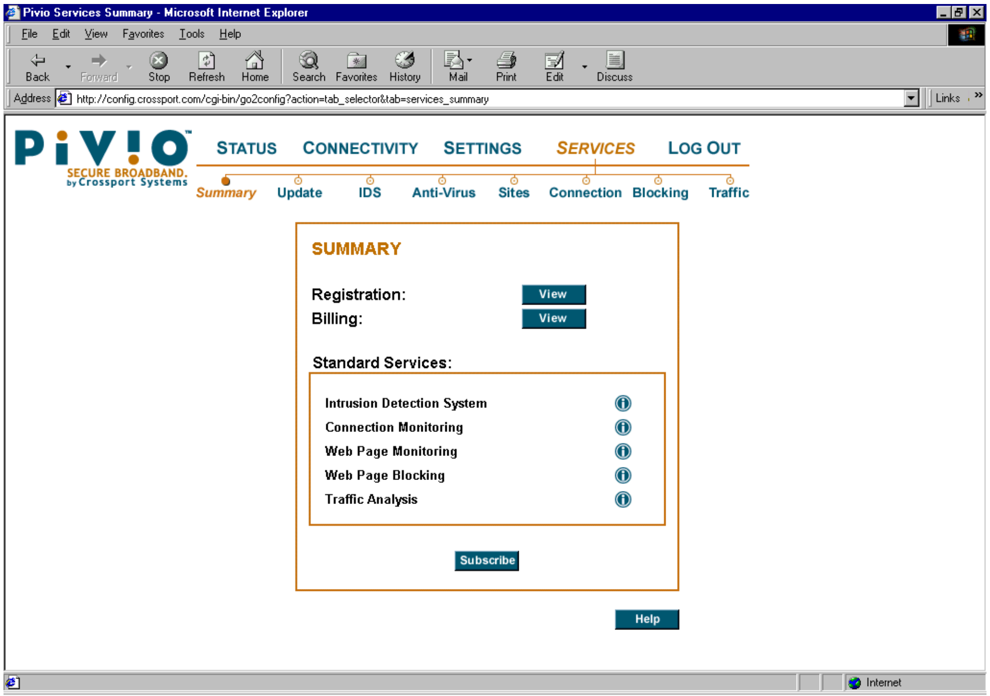
Billing Confirmation

Billing Contact:	
Name:	Joe Smith
Company:	Crossport Systems
Address:	10940 NE 33rd Place, Suite 101
	Bellevue, WA, 98004
	USA
Email:	kevins@crossport.com
Phone:	425-576-8382
Fax:	425-576-9953
PO#:	314159265
Billing Frequency:	Monthly
Method of payment:	Invoice
Card Type:	
Credit Card #:	
Exp:	4/2001

Edit

You can edit your registration and billing information on this screen

Step 6: The main Services screen now appears. This screen lets you subscribe to Pivio Services, and receive information about each service. You can also view and change your registration and billing information.



Use the Services page to subscribe to Pivio Services

Step 7: To complete installation, restart your browser. You do not need to reboot your computer.

Important!
Make sure you exit your browser and start it again.

You are now ready to test the Pivio Firewall to verify it is working, as described on the next page.

Testing your configuration

Use the following procedure to verify that the Pivio Firewall is configured correctly and is working. If you do not get the expected results, please refer to *The Pivio Firewall Troubleshooting Guide*, for information on how to locate the problem.

Step 1: Launch your Internet browser.

Step 2: Type `www.crossport.com` in your browser's address window to navigate to the Crossport Systems site.

Step 3: Make sure that you can view various pages at the site.

Chapter 4
Static IP configuration

This chapter covers configuring the Pivio Firewall for a *Static IP address*. If you know you have a static IP address, you should use this chapter. If you are not sure, try the procedure in Chapter 3 first.

What is a “static IP address”?

Every computer that connects to the Internet must have an IP address. This is the “address” of your computer. When you request information, the web page uses your IP address when it sends the information.

A *static* IP address means that you always have the same address. Most DSL and cable modems are always connected, and therefore use static IP addresses.

A *dynamic* IP address changes every time you connect to the Internet. When you connect to the Internet through a dial-up connection, you usually get a dynamic IP address.

How to determine if you have a static IP address

To determine if you have a static IP address, examine the information your Internet Service Provider (ISP) provided. If the information includes a specific IP address, then you have a static IP address.

If, however, the information indicates you have “DHCP” or “dynamic IP,” then you have a dynamic IP address.

If you have a static IP address, the Pivio Firewall will use that address for itself. It will then give every computer on your network a dynamic IP address.

Before you can configure the Pivio Firewall to use a static IP address, you have to set each computer to use a dynamic IP address. Because the Pivio Firewall “owns” the IP address, it will issue dynamic addresses to each computer on your network.

Record your current settings

When you configure your computer to work with the Pivio Firewall, you will erase the static IP settings from your computer and enter them into the firewall. If you ever reset the Pivio Firewall , you will need to re-enter these values.

Write the values in the following table before you erase them.

Each of these entries will be a set of four numbers separated by periods (for example, 192.168.5.37).

IP Address:	_ _ _ . _ _ _ . _ _ _ . _ _ _
Subnet mask	_ _ _ . _ _ _ . _ _ _ . _ _ _
Gateway: **(Router Address)**	_ _ _ . _ _ _ . _ _ _ . _ _ _
DNS Servers: **(Name Server addr)**	_ _ _ . _ _ _ . _ _ _ . _ _ _
	_ _ _ . _ _ _ . _ _ _ . _ _ _
	_ _ _ . _ _ _ . _ _ _ . _ _ _

Configuring your computer

Configuring your computer to work with the Pivio Firewall involves changing your computer from using a static IP Address to using a dynamic IP Address. The details will vary depending on the type of computer and operating system you have.

You will need to make the changes to each computer on your network.

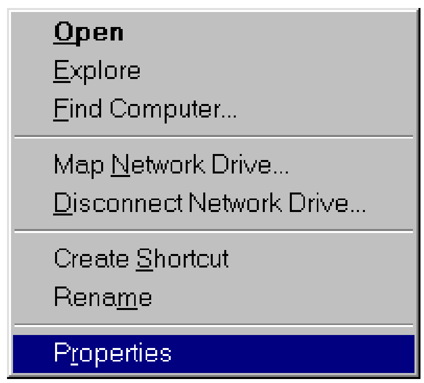
Note
Without the Pivio Firewall, each computer you connect to the Internet requires a separate IP address. With the firewall, you use only one IP address for all your computers. The Pivio Firewall will support over 1,000 computers using a single IP address.

Windows 95/98/ME configuration



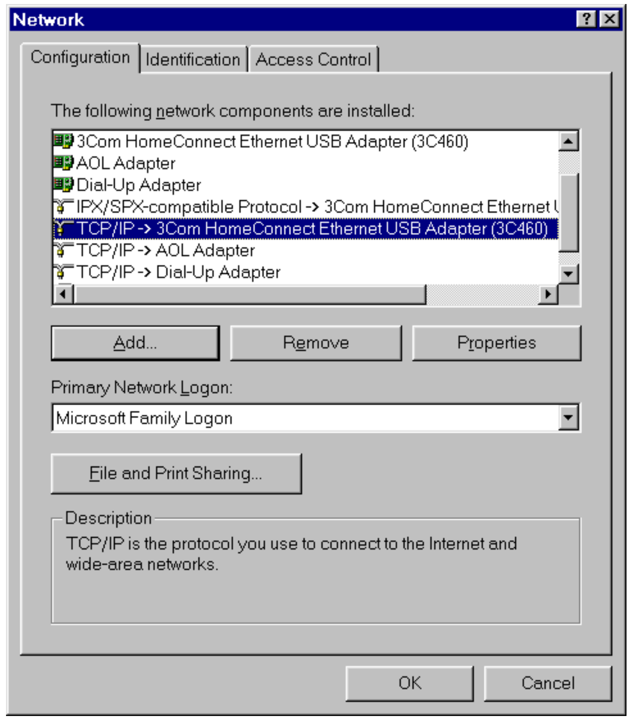
Use this procedure if you are running Windows 95/98 or Windows Millennium.

Step 1: Right-click the Network Neighborhood icon on your desktop and select "**Properties**" from the pop-up menu that appears.



*Choose **Properties** from this menu*

Step 2: Find the **TCP/IP Protocol** in the list of available network components that your network is using, and click **Properties**.



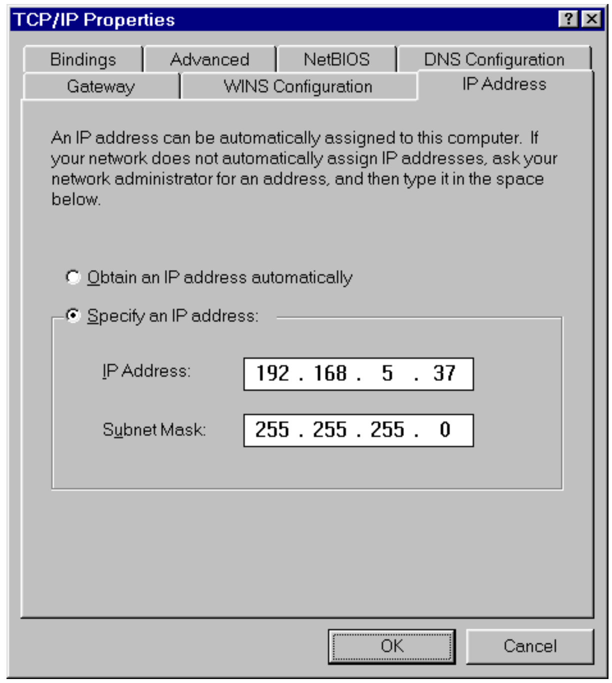
Find the TCP/IP setting your network is using

There will usually be several different items in this list. Your network protocol will always start with "TCP/IP" and will usually include the name of the manufacturer.

Step 3: If the IP Address tab is not at the front, click on it to bring it to the front.

You will do two things on this page:

- Write down the IP Address and Subnet Mask that is already there. Write these down on the chart on page 34.
- Change the setting to **Obtain an IP Address Automatically**.



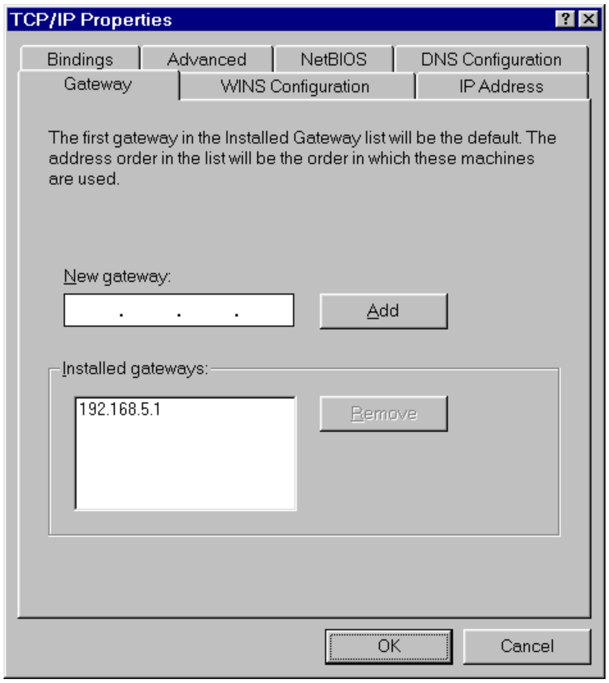
Write down the address on your screen



*Make sure **Obtain an IP address automatically** is selected*

Step 4: Click on the **Gateway** tab to bring it to the front.

Write down the Gateway number in the chart on page 34. Then remove the numbers by selecting each one and clicking **Remove**.



Write down the Gateway number (under "Installed gateways") and then remove it

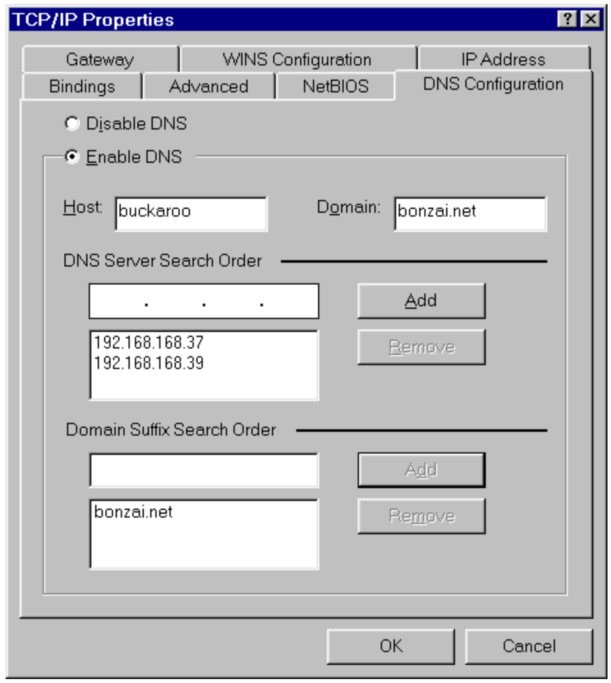
Multiple Gateway numbers

Windows will allow more than one Gateway number, although only one of those numbers is actually used. If you have more than one Gateway number, you need to find the one that is used.

To do this, compare the Gateway numbers to your IP address. Find the one that is most similar to your IP address. Usually the first two or three numbers of the IP address and the Gateway will be the same. For example, an IP address of 192.168.5.37 might have a Gateway of 192.168.5.1.

Step 5: Click on the **DNS Configuration** tab to bring it to the front.

Write down the numbers under "DNS Server Search Order." There can be up to three numbers here.



*Write down the **DNS Server Search Order** numbers*

Step 6: Select **Disable DNS.**

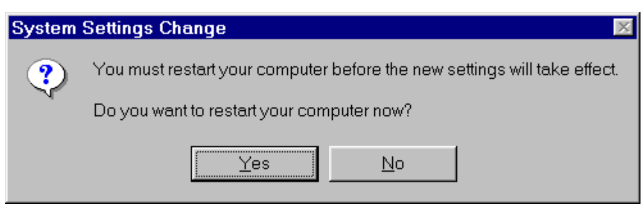


*Click on **Disable DNS***

Step 7: Click on **OK** to go back to the Network page.

Click on **OK** on the Network page to close the Network page.

Step 8: A dialog appears asking if you want to restart your computer. Click on **Yes**.



*Click **Yes** to restart your computer*

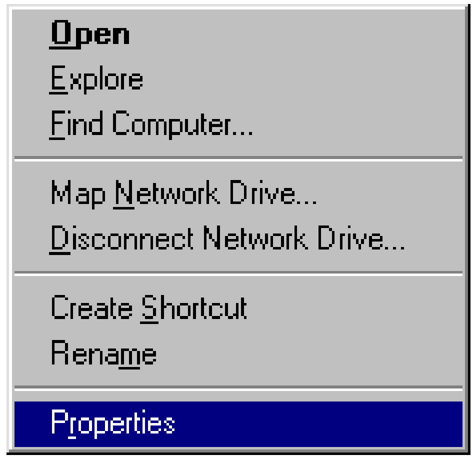
Once your computer has restarted, you are ready to configure the Pivio Firewall.

Windows NT configuration

Use the following procedure for computers that are running Windows NT 4.

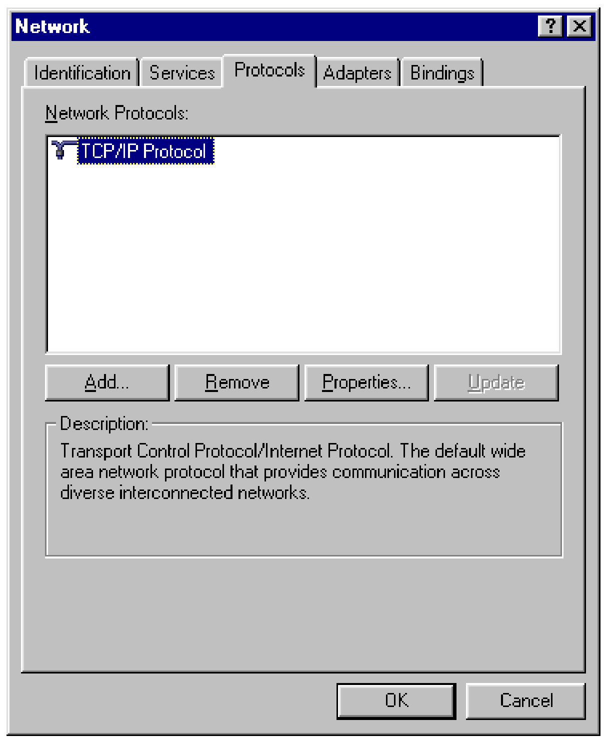


Step 1: Right-click the Network Neighborhood icon on your desktop and select **Properties** from the pop-up menu.



Choose ***Properties*** *from this menu*

Step 2: Click on the **Protocols** tab and select the **TCP/IP Protocol** item.

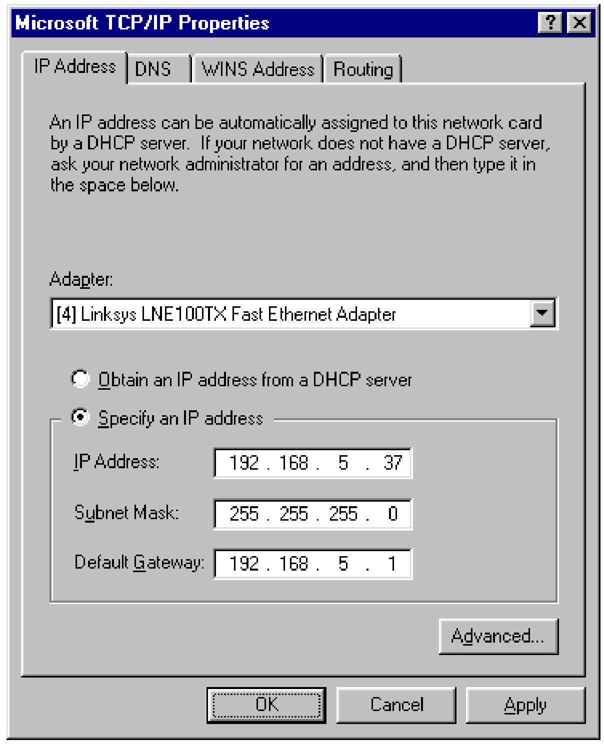


Click the Protocols tab and select ***TCP/IP Protocol***

Step 3: Click **Properties** to bring up the Microsoft **TCP/IP Properties** dialog.

Make sure the adapter used to connect to the network is selected.

Step 4: Write down the values for "IP Address," "Subnet Mask" and "Default Gateway" in the chart on page 34.



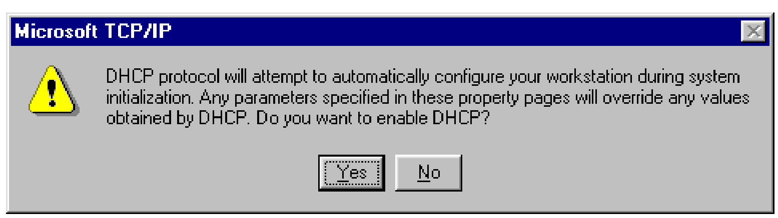
Write down the "IP Address," "Subnet Mask" and "Default Gateway"

Step 5: Select "Obtain an IP address from a DHCP Server" on this dialog.



Select "Obtain an IP address from a DHCP Server"

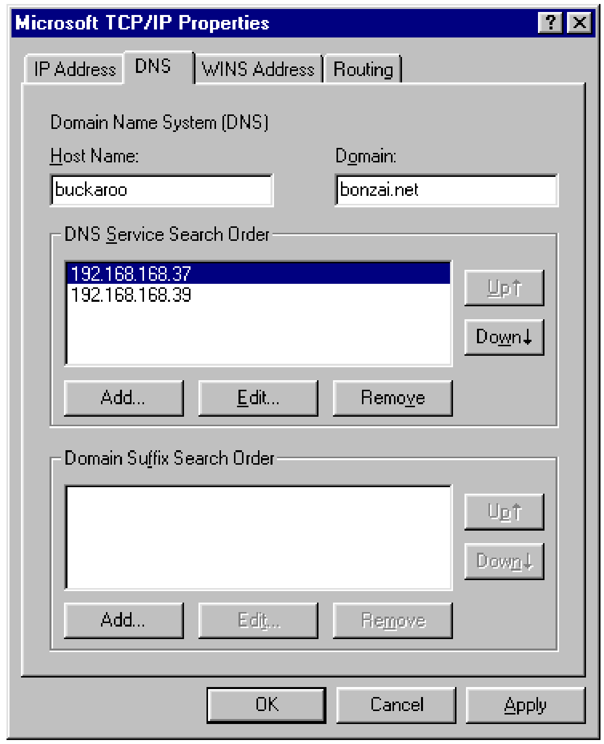
Step 6: A dialog appears warning you that values on these pages will override DHCP values. Click **Yes**.



*Click **Yes** to use DHCP*

Step 7: Click on the **DNS** tab to bring it to the front.

Write down the numbers under **DNS Service Search Order**. There can be up to three numbers here.



*Write down the **DNS Service Search Order** numbers*

Step 8: Use **Remove** to remove all the DNS values from the list.

The Pivio Firewall will provide the DNS values to the computer as needed.

Step 9: Click on **OK** to go back to the Network page.

Click on **Close** on the Network page.

Step 10: A dialog appears asking if you want to restart your computer. Click **Yes**.



*Click **Yes** to restart your computer*

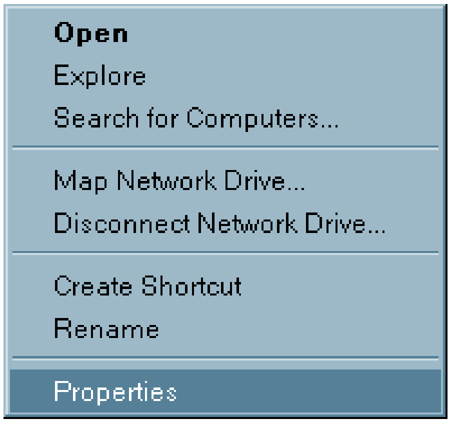
Once your computer has restarted, you will be ready to configure the Pivio Firewall.

Windows 2000 configuration

Use the following procedure for computers that are running Windows 2000.



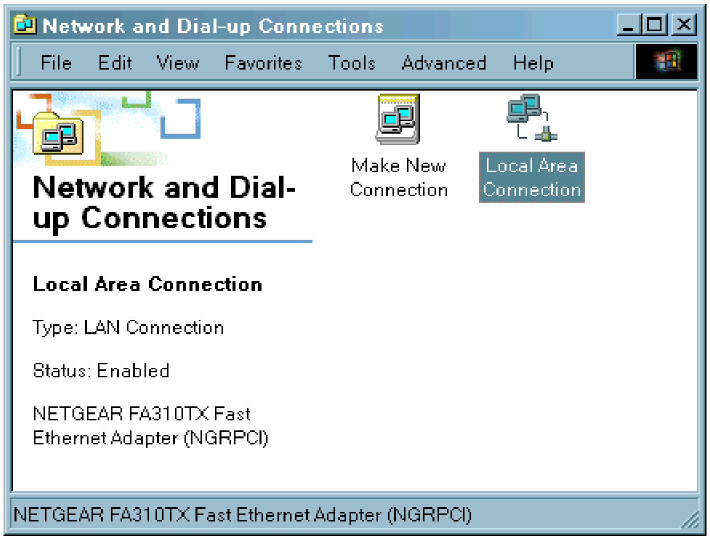
Step 1: Right-click the **My Network Places** icon on your desktop and select **Properties** from the pop-up menu.



*Choose **Properties** from this menu*

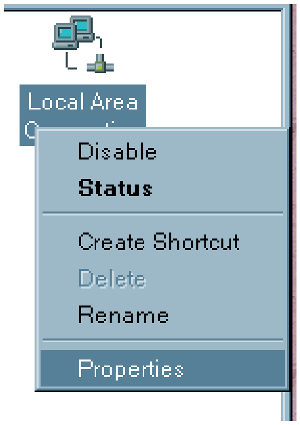
Step 2: A folder will open that displays all your network connections. Select the connection you use for the Internet.

In the following screen shot, this computer connects to the Internet through a Local Area Network (LAN)



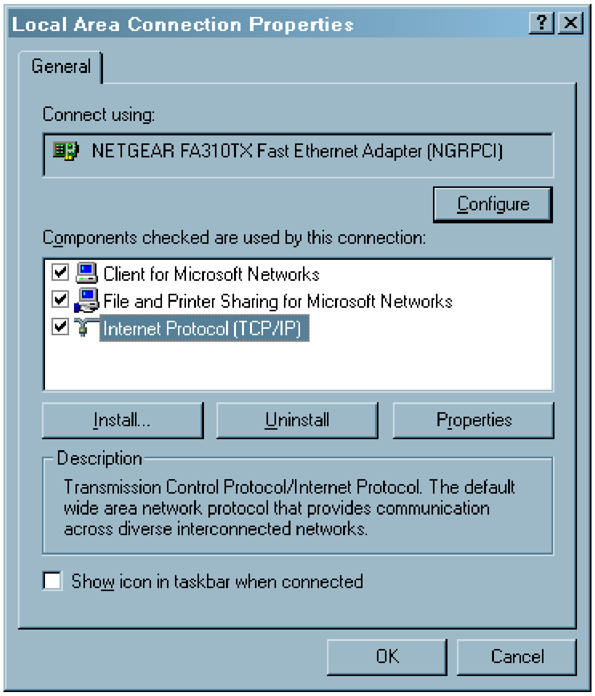
Select the connection you use to reach the Internet

Step 3: Right click on the connection and select **Properties** from the menu.



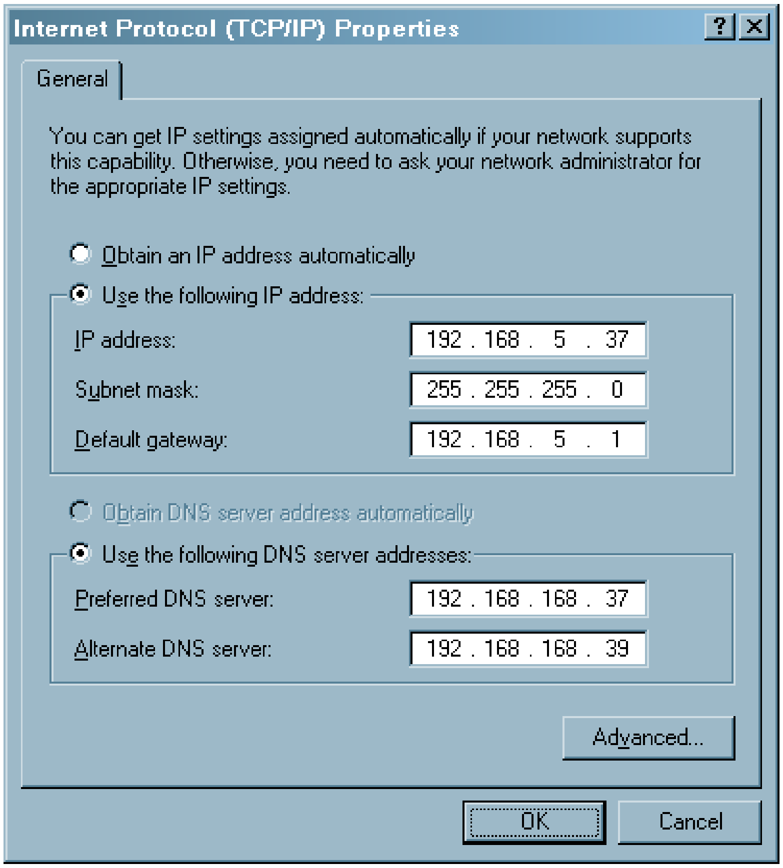
*Right click on the connection and choose **Properties***

Step 4: The **Local Area Connection Properties** dialog appears. Select "Internet Protocol (TCP/IP)" and click **Properties**.



*Select "Internet Protocol (TCP/IP)" and click **Properties***

Step 5: Write down the values for "IP Address," "Subnet Mask," "Default Gateway" and the "DNS servers" in the chart on page 34.

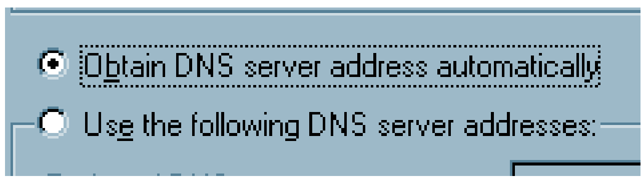


Write down the "IP Address," "Subnet Mask," "Default Gateway," and the DNS servers

Step 6: Select "Obtain an IP address automatically" on this dialog. Also select "Obtain DNS server address automatically" on this dialog.



Select "Obtain an IP address automatically"



Select "Obtain DNS server address automatically"

Step 7: Click **OK** to close the **TCP/IP Properties** dialog. Click **OK** to close the **Local Area Connection Properties** dialog.

You will need to restart your computer before proceeding to configure the Pivio Firewall.

Macintosh configuration

Use this procedure for computers running the Macintosh OS Version 8 or newer.



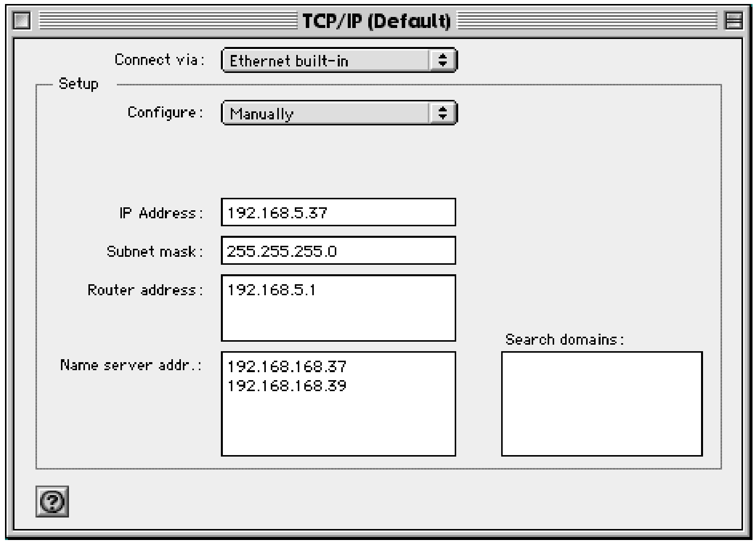
Step 1: Open the **Control Panel** on the **Apple** menu and choose the **TCP/IP** item.



*Choose the **TCP/IP** control panel*

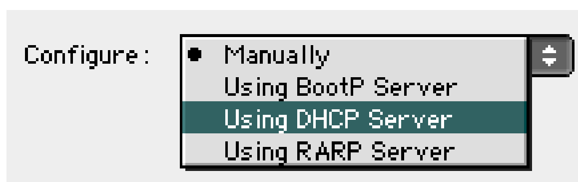
Step 2: Write down the values shown in the TCP/IP dialog window in the chart on page 34.

The **Router address** is another name for **Gateway**. The **Name server addr** goes in the **DNS Servers** listing.



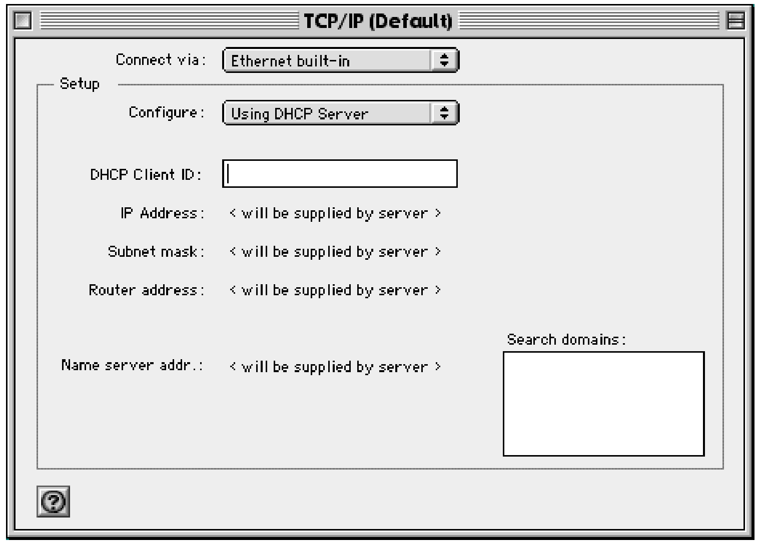
Write down the values shown in your dialog

Step 3: Click on the arrows on the right of the **Configure** list box and choose "Using DHCP Server."



Choose "Using DHCP Server"

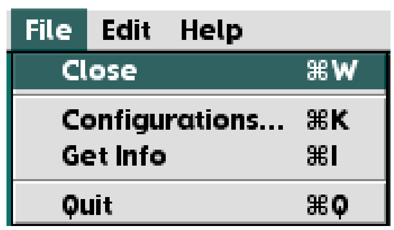
Step 4: The dialog shown in the following figure will appear. You do not need to enter anything for "DHCP Client ID."



You do not need to enter anything on this dialog

Step 5: Choose **Close** from the **File** menu to close this dialog.

When prompted to save your changes, click on **Save**.



Choose "Close" to end this process

You need to restart your Macintosh before proceeding to configure the Pivio Firewall.

Linux configuration

Use the following procedure if you are running Linux.

Step 1 Record your current settings

Use “netstat -ni”, “netstat -nr” and “ifconfig” to determine the interfaces, routing and addresses.

First, you should find the available interfaces:

```
# netstat -ni
Kernel Interface table
Iface   MTU Met    RX-OK RX-ERR RX-DRP RX-OVR    TX-OK TX-ERR TX-DRP TX-OVR Flg
eth0   1500   0   521478      0      0      0   626019      0      0 0 BRU
lo    16192   0    92498      0      0      0    92498      0      0 0 LRU
#
```

In this example, there are two interfaces, the loopback (`lo`) and the ethernet (`eth0`). The ethernet (`eth0`) is the one to use.

Second, look up the default route:

```
# netstat -nr
Kernel IP routing table
Destination     Gateway         Genmask         Flags   MSS Window  irtt Iface
255.255.255.255 0.0.0.0         255.255.255.255 UH       40 0          0 eth0
192.168.1.0     0.0.0.0         255.255.255.0   U        40 0          0 eth0
0.0.0.0         192.168.1.1     0.0.0.0         UG       40 0          0 eth0
#
```

The default route (destination 0.0.0.0) towards the IP 192.168.1.1 is the “gateway.” The other entries are a forced broadcast out the device `eth0` (destination 255.255.255.255) and a “connected” network (destination 192.168.1.0).

Finally, obtain the IP address for `eth0`:

```
# ifconfig eth0
eth0      Link encap:Ethernet  HWaddr 00:50:C2:08:50:01
          inet addr:192.168.1.5  Bcast:192.168.1.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:523211 errors:0 dropped:0 overruns:0 frame:0
          TX packets:627431 errors:0 dropped:0 overruns:0 carrier:0
          collisions:3561 txqueuelen:100
          Interrupt:10 Base address:0xe800
#
```

In this example, the address (`inet addr`) is 192.168.1.5 and the netmask is 255.255.255.0 (`Mask`).

Step 2 Set your IP address to 172.30.192.2 and your default gateway to 172.30.192.1

First make sure you have “root” access:

```
% su
Password: <root password>
#
```

Then run `ifconfig` to set the new IP address. Do not do this remotely, as you may lose network access to the machine:

```
# ifconfig eth0 172.30.192.2 netmask 255.255.255.0
```

Add the default route:

```
# route add -net default gw 172.30.192.1
```

Step 3 You will want to also update your startup files to set the correct address on boot up. This is distribution dependent:

redhat

change the settings in `/etc/sysconfig/network-scripts/ifcfg-eth0`

```
DEVICE=eth0
BOOTPROTO=static
BROADCAST=172.30.192.255
IPADDR=172.30.192.2
NETMASK=255.255.255.0
NETWORK=172.30.192.0
ONBOOT=yes
```

change `/etc/sysconfig/network`:

```
NETWORKING=yes
HOSTNAME=mylinuxbox
GATEWAY=172.30.192.1
```

debian

change the file /etc/init.d/network

```
#!      /bin/sh
ifconfig lo 127.0.0.1
route add -net 127.0.0.0
IPADDR=172.30.192.2
NETMASK=255.255.255.0
NETWORK=172.30.192.0
BROADCAST=172.30.192.255
GATEWAY=172.30.192.1
ifconfig eth0 ${IPADDR} netmask ${NETMASK} broadcast ${BROADCAST}
```

Other Linux implementations may vary. Also you may need to update `/etc/hosts` and `/etc/networks` depending on your distribution.

Step 4 Set your DNS server to 172.30.192.1 (optional, but recommended).

edit /etc/resolv.conf and add a line that says:

```
nameserver 172.30.192.1
```

This is optional, but recommended. You should add it in, and then remove it once the Pivio Firewall is fully configured.

Using Linux configured for DHCP

Under some conditions, you may want to configure Linux for DHCP. If you do so with Red Hat Linux, you need to make sure that you manually provide a domain server name. If you do not, Red Hat Linux will hang when it boots.

To provide a domain server name, edit `/etc/resolv.conf` and add a domain name for your LAN.

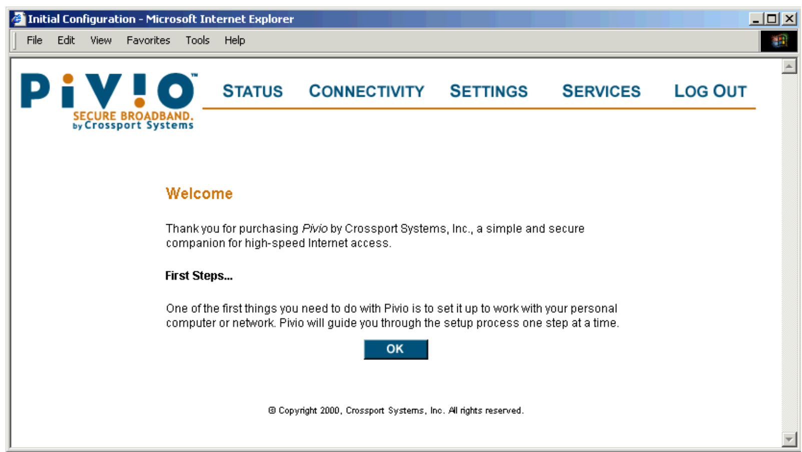
Configuring the Pivio Firewall

You configure the Pivio Firewall using your Internet browser.

Step 1: Launch your Internet browser.

If the configuration page doesn't appear, type in **config.pivio.com**.

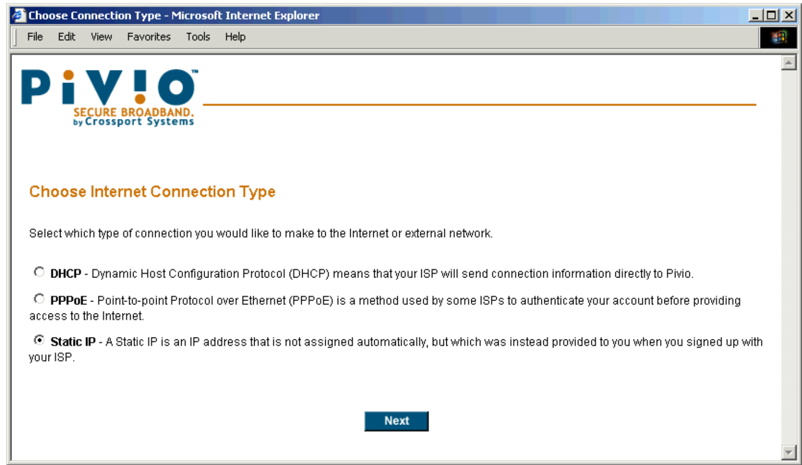
Note
If you receive an error message when you type in **config.pivio.com**, type in **172.30.192.1** (this is the IP address of the Pivio Firewall). This usually indicates a problem with your Domain Name Server (DNS) configuration, which you will need to solve before connecting to the Internet.



Use your browser to configure the Pivio Firewall

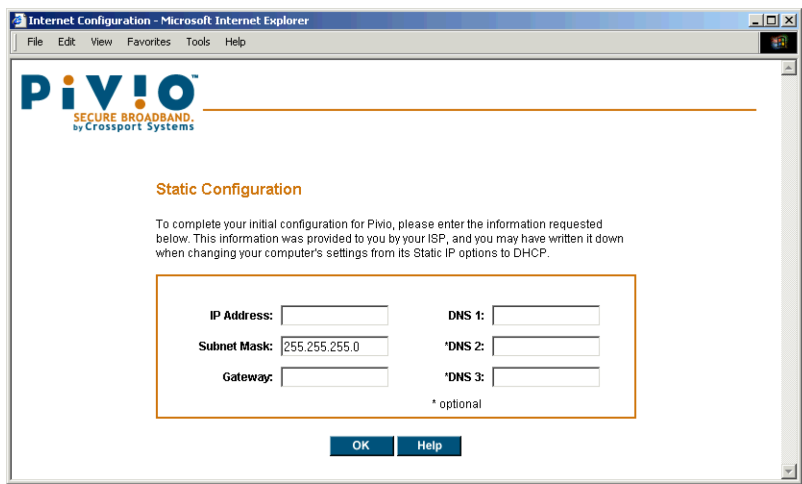
Note
Although this User's Guide shows screen shots from Internet Explorer and Windows 98, you can use any browser and operating system to configure the Pivio Firewall. You only need to configure the firewall once from any computer on your network.

Step 2: A screen appears asking you to choose the type of connection you want to use. Make sure **Static IP** is selected and click **Next**.



Make sure "Static IP" is selected

Step 3: On the next page, enter your *IP address*, *Subnet Mask*, *Gateway*, and DNS addresses (from the chart on page 34).

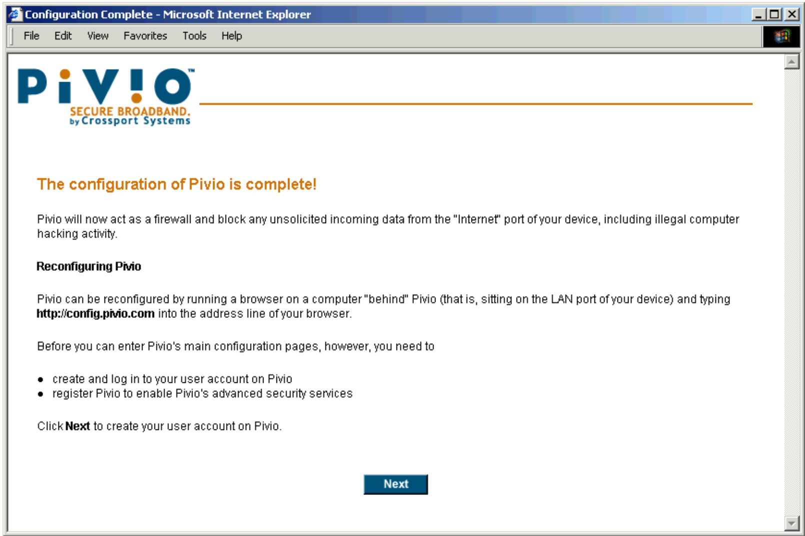


Enter your IP address, Subnet mask, Gateway, and DNS addresses

The Pivio Firewall will fill in the most common Subnet mask. If yours is different, delete the suggested one and type in your Subnet.

Configuration complete

The Configuration Complete page indicates that the Pivio Firewall found your ISP and obtained an IP address.



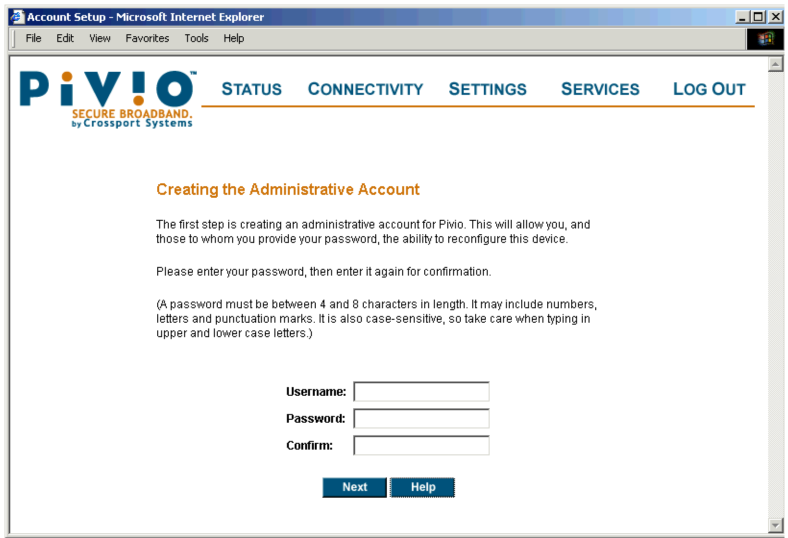
The Pivio Firewall is correctly configured

Set up your password

The next step is to create a user account and password for the Pivio Firewall. Once created, this account and password will be used whenever you want to change the Pivio Firewall's configuration.

Step 1: After the **Configuration Complete** screen appears as shown on the previous page, click **Next**.

The **Creating the Administrative Account** screen appears.



Use this screen to define an account and password

Step 2: Type in a one to eight character name for the account.

There is only one account per Pivio Firewall. When you choose a different user name, you are renaming the one account in the firewall.

Step 3: Choose a four to eight character password, and enter it in the **Password** field.

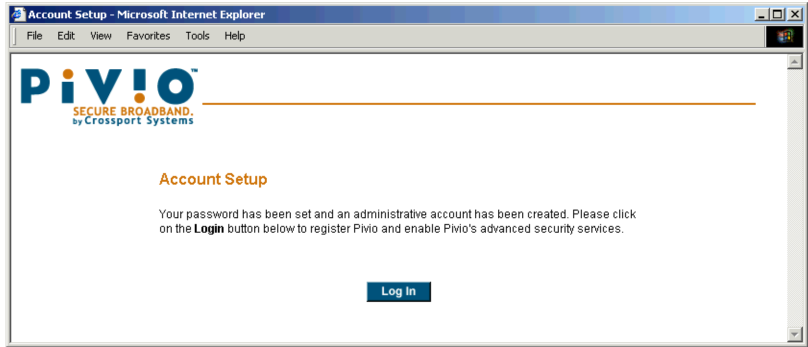
Your password may include numbers, letters and punctuation marks. It is also case-sensitive, so "password" is different from "PassWord."

Step 4: Confirm your password by typing it again in the **Confirm** field.

Note
You must enter a password. You cannot create an account without a password.

Step 5: Click **Next**.

Your password for the Pivio Firewall is now set. You'll need your password each time you configure the Pivio Firewall. Please make a note of it and keep it in a safe place.

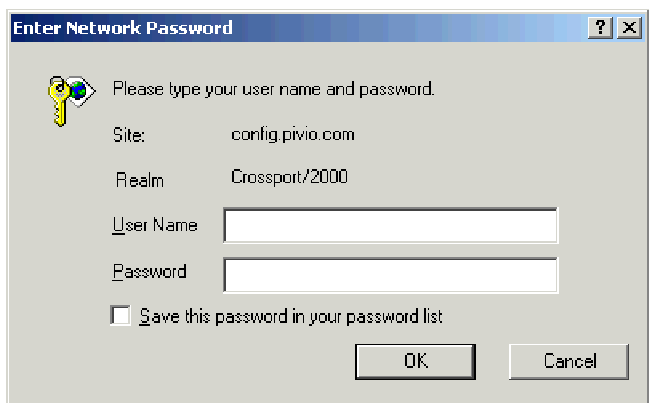


You now have a working user name and password

Caution
The password can be reset by resetting the Pivio Firewall. If someone has access to the firewall, they can simply reset the device to change the password. If you need a high level of physical security, you should lock up the Pivio Firewall.

Step 6: Click the **Log In** button to continue configuration.

Step 7: When prompted to log in, type your user name and enter your password.



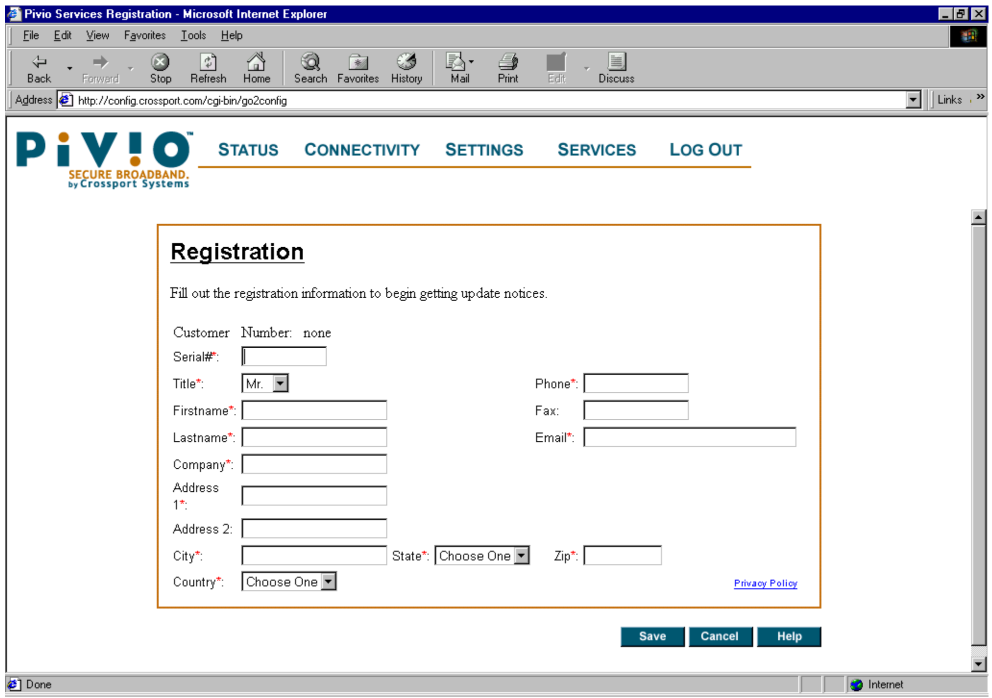
Enter your account information to continue configuring the Pivio Firewall

Registering your Pivio Firewall

Now that your Pivio Firewall is configured and your user account set up, the next step is to enter registration information. This information is securely transmitted to Crossport Systems. You can also set up a billing account and sign up for Pivio Services.

Step 1: After you log into the Pivio Firewall, a screen appears asking you for registration information. Fill out the fields on this screen.

Note that fields marked with a red asterisk (*) must be filled out before the Pivio Firewall will accept the registration information.

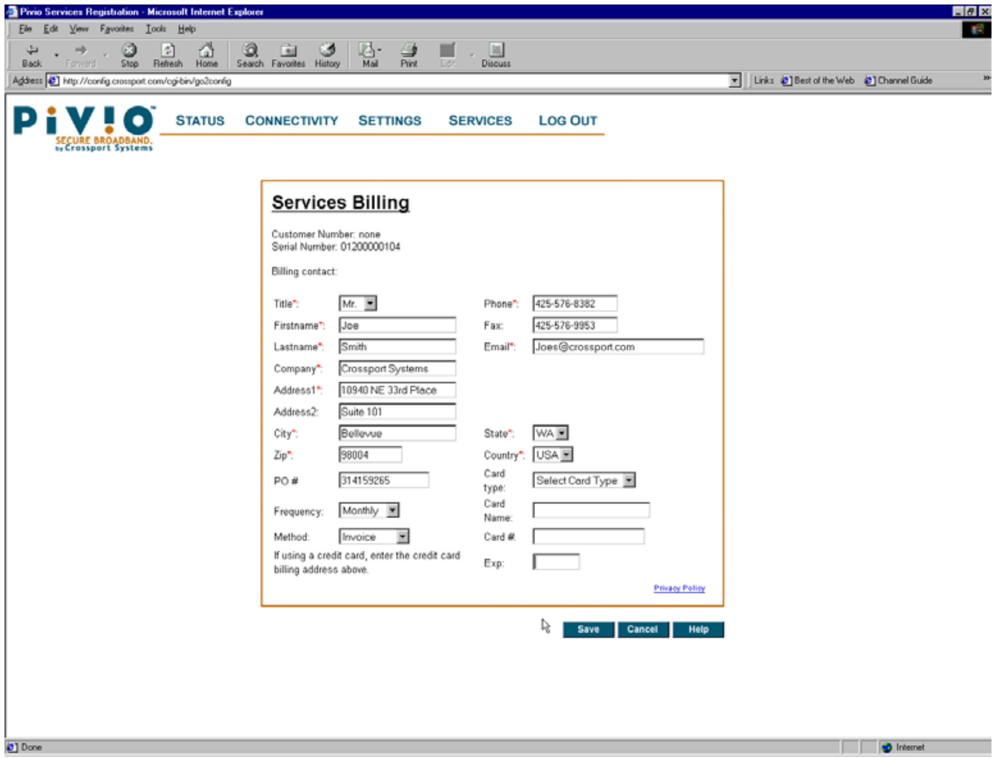


Fill out the fields on this form

Step 2: Click **Save** to save the information.

Step 3: You are now prompted to enter your billing information for Pivio services.

Note that fields marked with a red asterisk (*) must be filled out before the Pivio Firewall will accept the billing information.

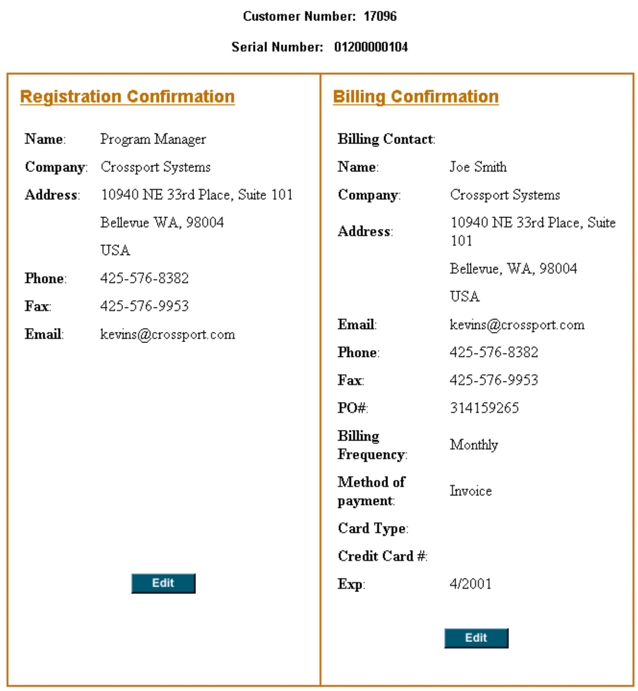


Fill out the fields on the ***Services Billing*** *screen*

Step 4: Click **Save** to save this information.

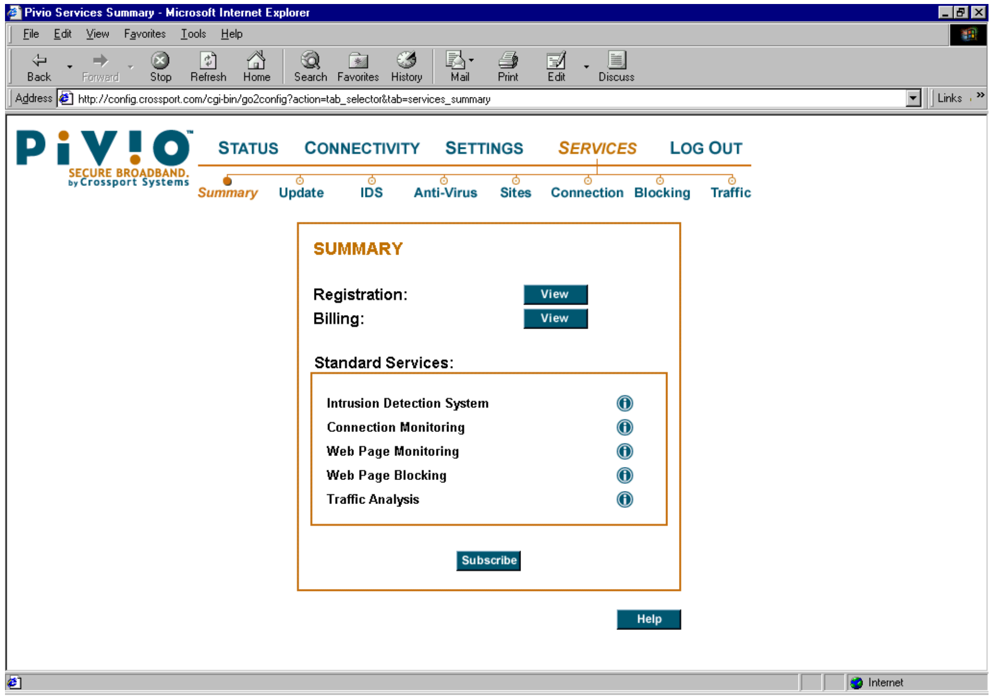
Step 5: You will now see a screen that lets you edit your registration and billing information.

If the information is correct, click **Next**.



You can edit your registration and billing information on this screen

Step 6: The main Services screen now appears. This screen lets you subscribe to Pivio Services, and receive information about each service. You can also view and change your registration and billing information.



Use the Services page to subscribe to Pivio Services

Step 7: To complete installation, restart your browser. You do not need to reboot your computer.

Important!
Make sure you exit your browser and start it again.

You are now ready to test the Pivio Firewall to verify it is working, as described on the next page.

Testing your configuration

Use the following procedure to verify that the Pivio Firewall is configured correctly and is working. If you do not get the expected results, please refer to *The Pivio Firewall Troubleshooting Guide*, for information on how to locate the problem.

Step 1: Launch your Internet browser.

Step 2: Type `www.crossport.com` in your browser's address window to navigate to the Crossport Systems site.

Step 3: Make sure that you can view various pages at the site.